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Every Day Problems.

Problem 1. Bad Roads:—

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Montreal, Toronto, Winnipeg, Vancouver, Regina.

WHEN YOU WANT THE BESTIN
MONUMENTS
Consult J. J. MacLEOD,
Stewiacke, N. S.
Manufacturer and Designer in all the best grades of Marble, Granite and Freestone
All orders will receive careful attention and prompt delivery. Good workmanship at lowest prices.

FLORICULTURE.

Growing Roman Hyacinths in Water.

A. M. of St. John writes: I can not [illegible] grown in water that I wish to recommend the experiment to others.

Ans. One bulb placed in a small vase on October 9th, was brought into light November 25th and bloomed from December 11th to January 1st, there were two flower spikes bearing sixteen small, but very fragrant blossoms.

There is nothing so effective in the spring as a bed of bright blossoming bulbs. So one of the first pieces of out door work in the fall is the preparation of the bulb bed and buying Dutch bulbs.

But still a great deal depends on the way the bulb is grown, good ground, good cultivation and proper care will develop better flowers than poor ground and neglect from bulbs of equal quality, the poorly grown bulbs will have just as many flowers as the well grown bulbs, but they will not be as large nor as fine. The soil that bulbs like best is of light texture that gives good drainage and the percentage of loss is not so great if a lot of rain comes just after planting. If your soil is stiff and clayey and takes a long time to dry out, add sand in large quantities mixing it well with the soil.

Bulbs will flower in either sunshine or shade, but like most flowering plants they are mostly partial to sunshine, especially the early spring flowers such as the Tulips, Hyacinth and Daffodil, at the same time if they are wanted in a shaded place don't hesitate to plant there as they will surely flower and look well, but the flower will probably be weaker stemmed and not so large as if grown in the sunlight.

Single Tulips are best for bedding purposes, in fact for all general purposes it is better than the double flowered type, but, as with all flowers you will find some people who prefer a double Tulip simply because it is double. I often wonder if these cranks on double flowers ever stopped to admire the beauty of a head of cabbage, it is double enough and only lacks in color what some of our double flowers are.

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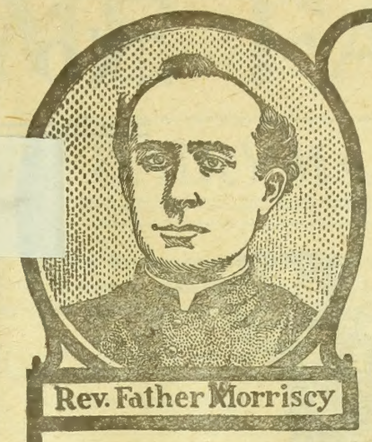
The yellow Tulips are very popular and justly deserve it, the colors being of a clearness hard to find in any other flower.

One of the good Pinks is the College Maid.

Everyone should plant a few Crocuses, if only for the inexpensiveness of the bulbs, they cost one cent each, moreover they may be planted on lawns in shrubbery borders and such places and will gradually spread until they cover a large area and they are not troublesome to other vegetation as they require no handling and if the tops are cut with the lawn mower it does no harm. They flower so very early in the spring that they add cheerfulness to the most barren spots and it is not infrequent seeing them flowering when a light flurry of snow happens along. Plant the bulbs in clumps about six inches apart and three inches deep, cover with strawey manure or brush.

Hoarseness in a child subject to croup is a sure indication of the approach of the disease. If Chamberlain's Cough Remedy is given at once or even after the croupy cough has appeared, it will prevent the attack. Contains no poison. Sold by all dealers.



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19 Marmora Street, - LONDON, ONTARIO.
Largest Manufacturers of Concrete Machinery in Canada.

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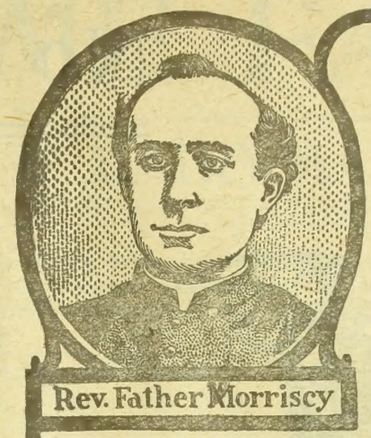

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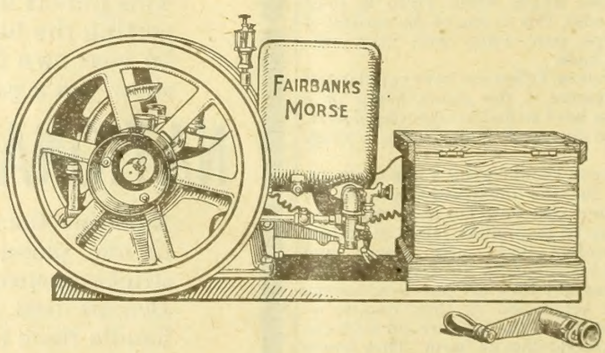
Uses less fuel when in operation than any other engine



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Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., October 12, 1909. Number 1.

THE HALIFAX EXHIBITION.

IN the clear sunlight of a perfect Indian summer day, Nova Scotia's thirteenth annual Provincial Exhibition was formally opened on Saturday, September 25th. The opening exercises took place at a luncheon, given by the Commission in their dining room in the Executive Building, and were marked by some excellent speeches, in which the educational value of the exhibition, in demonstrating the variety of Nova Scotia's agricultural, horticultural and other varied resources, was set forth. The luncheon was presided over by Mr. Justice Longley, President of the Exhibition Commission, and after a series of addresses by prominent gentlemen, expressing satisfaction at progress of the exhibition, hopefulness for the future and the elimination of dangerous spectacular acts before the grand stand, the fair was formally declared open by His Honor, Lieutenant-Governor Fraser.

Judge Longley's Address

was in part as follows :—"I have so often, on this opening occasion referred to matters touching the Provincial Exhibition that I fear my story will become trite. For some years we struggled with the initial difficulties—unmerited criticism, local prejudice, and needless worry over deficits. We were favored with kindly proposals that we should hold exhibitions every other year, alternately with St. John; that we should abjure amusements of every form and generally look solemn. I must frankly confess that the Commission was very little affected by these crude suggestions coming from persons who had no responsibility and who had scarcely earned, by successful efforts in the show business, the right to obtrude their opinions. We have gone straight on attending to our business to the best of our judgment, and I think I may say that at last we can regard ourselves as a permanency. It is no longer a question of working up special interest or creating special attractions to get public attention; the exhibition is now a well-established and eagerly-looked-forward-to event, with its large and firm constituency of friends. We hear no more talk of semi-annual exhibitions, very little statement that "Halifax is not the proper place," and by degrees the reformer has quieted down in respect to the moral qualities of our attractions.

"This year we have a new departure in respect of attractions. We have determined to have no vaudeville, no special blood-curdling acts and no evening performance. It is only frank to say that moral considerations have had nothing to do with this change of policy. We used vaudeville and special attractions in the beginning because they were distinct agencies in drawing patrons; the public wanted amusement and we gave them the best that could be got. We had evening performances because they were enthusiastically patronized by the public. But in course of time their drawing properties began to subsidize. Autumn evenings in this climate are liable to be chilly and grand-stand performances uncomfortable. The moving pictures arrived and other forms of evening entertainment, which interfered with our evening performances. When they cease to be profitable we drop them. That is all.

"We, this year, experiment with an exhibition devoid of all special attractions except the speeding contests, and we have hope that our patronage will not on that account be seriously diminished. We are assured this year of a splendid exhibit in all departments. The entries have been more numerous than ever before, except at the Dominion Exhibition. In our efforts to have the evening performances made as agreeable as possible, we were compelled to fix early dates. Having dropped these, we are able to make the date correspond with the acme of our agricultural productions and we have reason to believe that the later dates we have fixed this year are very acceptable to the farmers generally.

"The exhibition has, I think I may fairly say, developed into a permanent and recognized institution, and the people of the province look forward to this autumn show with the same anticipation as to the religious and fraternal conventions in the early summer. We have no doubt whatever that the exhibition has had an immensely stimulating influence upon the agricultural and industrial life of the province. Without it we should be hopeless. We see a steady career of usefulness before us. At this period, when the Government is making special efforts to revive the agricultural interests of the province, and seeking to create industrial activity by a Technical College, the need is more imperative to second and give effect to these efforts by a large Provincial Exhibition. Here is to be seen the result of all activities. Whatever we are doing will be seen here. The yearly progress will be observed here, and any county, which is not seen here is not participating in the general progress. The best county, industrially, is the one with the greatest number of exhibits here.

"In addition to the educational and stimulating effects of the exhibition as a field of friendly rivalry among exhibitors, we seek to make it the centre of social meeting and union among all classes in the province. Upon these grounds gather all the enterprising citizens of the country in the capital city of the province. Apart from the exhibition, Halifax offers many attractions to visitors. It has beautiful scenery, charming boat clubs, various amusements, and is the centre of the commercial life of the province. Halifax seeks the visitors and the visitors seek Halifax. The Provincial Exhibition brings them together. Our efforts in this direction, however, will fall short of the best results unless we are seconded by the cordial co-operation of all classes. We expect the business men of Halifax to aid in making the many thousands who come to Halifax enjoy themselves and derive advantages from the trip. We expect all enterprising farmers to favor us with their exhibits and their presence. The higher the point of efficiency this exhibition can attain, the greater will be its industrial effects. We distribute $10,000 a year among exhibitors—comparatively little of which remains in Halifax City.

"While we cannot shut our eyes to the fact that at this time the great Northwest is absorbing the larger share of the progress of Canada, yet I think there are indications that, in common with the other Eastern Provinces, Nova Scotia is growing faster and developing better than at any period since Confederation. Probably the next census will reveal a substantial increase in population and a still greater increase in wealth.

"The history of the world, especially in modern times, demonstrates beyond controversy, that every progressive community has exhibitions, and, without exhibitions, there is no progress. The live country is an exhibition country. The country without an exhibition is dead. Nova Scotia has the best exhibition of any community in Canada of the same size and it calls for the loyal support of every patriotic citizen. It has been handsomely sustained by the Government, the Capital City and the Press. Let it never be wanting in the sympathy and cordial approval of the people."

The Weather.

The weather man did not favor the Halifax Exhibition season. He rolled in a pall of water laden nimbus clouds that poured torrents of rain or heavy mists incessantly on Monday, Tuesday, Wednesday and Thursday. Friday, in its usual proverbial contrariness to the other days of the week, brought fine weather again, but a promising Saturday morning gave way to a drizzling disagreeable afternoon. The unfavorable weather prevented thousands of visitors from attending the fair and consequently the Commission's financial burden will not be a light one. In order to complete their programme, the management found it necessary to extend their time limit to include October 4th and 5th, but the greater number of exhibitors having moved out on October 2nd, the returns from the two extra fair days would not make up the damage caused by the weather man.

The Manufacturers' Exhibits

in the Main Building, as a whole, were only fair, but there were some exceptionally good displays. Among former advertisers, who had displays, were : The National Drug and Chemical Co., who dispensed their Sovereign Lime Juice from a tastily arranged well with its old-fashioned moss-covered bucket. The W. H. Johnson Co. showed a fine line of pianos and organs, and the Hewson Woolen Mills showed their superior Tweeds and underwear.

In the annex to the Main Building the Melotte, DeLaval, Sharples, National and Capital Cream Separators were exhibited by their respective representatives.

Machinery Hall

resounded with the whirl of machinery in motion and a set of barrel making machinery by the Lloyd Mfg. Co., Kentville, and several lines of Gasoline Engines by their respective agents. The Carritte-Patterson Co. had a display of their Amatite Roofing.

The Marine and Fisheries' Hall

contained interesting displays of live fish in tanks and all kinds of prepared and frozen fish. The mineral wealth of the province in the rough and refined stages were tastily displayed.

Agricultural Hall.

contained the best display of root and grain crops, thanks to the timely exhibition season, that was ever seen at a Halifax fair. The exhibits were of fine size and quality in every department with the exception of the potato classes which were hardly up to that displayed in those lines on previous occasions. It was a pleasing sight to enter the agricultural hall and there behold the acme which may be attained by the industrious tiller of the soil in the growing of such magnificent specimens of the various agricultural product's line. Superintendent Robertson of the Nappan Experimentul Farm was on hand with a series of tastily arranged arches on which he displayed specimens of the products of the Nappan farm.

The Horticultural Hall

contained a magnificent display of flowers and plants by professional and amateur floriculturists. The fruit display was very creditable, for special report see page 8.

The Dairy and Apiary Products.

were shown in the agricultural hall. There was a large entry in the cheese classes. The butter, owing to the warm weather prevailing at the time it was shipped to the fair had depreciated in quality and was rather oily, otherwise the quality was good. L. R. Rose, of Urbania, having won extensively at Fredericton and at the county fair, Stewiacke, showed at Halifax and won their first prizes. He is well pleased with the number of red tickets captured this year, next year, he expects to invade the Toronto show and claim some of the awards. Mr. Harvey Mitchell judged the dairy exhibits. A list of the prize winners will be found on another page.

Mr. Baker of Amherst, judged the apiary products. It would be advisable to have a section specially arranged for honey display, as it cannot be shown at its best in the dairy cold storage as at present. In cognizance to the important place the apiarist's interests occupies, the fair management would do well to give them ample opportunity to display their wares to the best possible advantage.

In the Women's Building.

the display of fine arts and various feminine handicrafts that testify to the ingenuity and skill of our maritime ladies. One of the interesting features displayed in this building was the tuberculosis exhibits. It was certainly worthy of the attention of every visitor. In pursuance with the great interest manifested by the world at large in the methods that are being adopted to stop the spread of tuberculosis, the Women's Council devoted many weeks of labor to the getting up of an exhibit that was calculated to give a great deal of information on the subject, as well as presenting a tuberculosis exhibit that was most scientific as well as interesting.

The walls were covered with charts and illustrations showing the spread of the disease in various countries in Europe, America and Canada and the preventatives, as also photographs of the most famous sanitarium, in which that of Kentville was shown with an excellent illustration of the splendid work accomplished since its establishment.

Some model open air tents and shacks were also shown, one of the most complete being the work of Richard Brown. In every illustration the necessity of light and fresh air was emphasized as factors in health and life.

The Live Stock and Judging.

The strongest feature at the Halifax exhibition is its live stock. Take the live stock away and the chief centre of attraction is lost. In view of this fact retrenchion of expenses in connection with the securing of competent judges for the various lines of live stock cannot be justified. It is almost an impossibility for any one man to judge both the heavy and light horse classes and give satisfaction to all concerned. Some exhibitors who haven't the stock to carry them to the highest awards and who cannot endure the thought of going to the bottom of the list are often dissatisfied with the placings, but when honest exhibitors who show stock that they know should not win the highest awards in the competition, find that they are unjustly given the first places, are heard denouncing the placing of the ribbons, there is something wrong and the judging operation ceases to give the instruction to the onlooker that it is calculated to give. There is entirely too much of the hop-step and a leap style of judging practised. Stock seems to be judged one year according to one standard and the next year another judge comes along with a different view of what constitutes a certain breed and the exhibitor and spectator are kept in an undecided muddle. Let us have consistent judges. Men who know what they are judging. Let us have a good light horse judge and another for the heavy horse classes. What is true in the horse classes is also true in the dairy classes. It is impossible for a man to judge Jerseys, Guernseys, Ayrshires and Holsteins with equal satisfactory results in the respective classes. While the Jersey men were well satisfied and while little or no dissatisfaction was expressed by the Guernsey men, some of the Ayrshire and Holstein men could not follow the judge's reasoning in many of the sections and in a few sections surprises came thick and fast. We might quote the case of McIntyre Bros, who won very extensively at Fredericton and who placed their stock under the judge at Halifax, under protest went down in practically the same company and with their stock in just as high a state of bloom. Matters of the same nature happened in the Holstein classes and we fail to know where the education comes in. More consistency is needed. And while a man may be an expert Jersey judge it does not follow that he is equally strong in his discerning faculties in regard to the other breeds. Considerable dissatisfaction also existed among the sheep men and that among breeders who are not habitual squealers.

The Horses.

were judged by J. H. Reed of Guelph, Ont. The equine exhibit with the exception of the Clydesdale class was not up to that of other years.

THOROUGHBREDS.— Haphazard and Cyclist shown by Geo. Haley, Windsor and H. C. Jewett, Fredericton, were the only stallions in the aged class. The only young stallion was Lucifer II, by Lucifer, shown by Wm. Robinson, Halifax, who also showed the only females, Binnelta Colton and Sileuel and their 1909 foals, by Lucifer, the famous College farm thoroughbred stallion. Haphazard won the championship diploma.

STANDARD BREDS—were out in fairly large numbers, Frank Power, by Rampart, Maids King by Maid King and Thos. Munro's beautiful black horse won first, second and third places respectively. The three-year-old stallions Rampart II, Baron Ajalon and King Dodds by Kaloe, won respectively in their class. Kinkrilla, by Achille and Brookside, by Woronoco were the only entries in the two-year-old stallion section. Hopewell Boy, by Maritime Prince and a handsome bay colt, by Achille won first and second respectively in the one-year-old stallion class. Dina Hartshow with Achille foal led the brood mare section. Frank Boutilier's Jessie Rampart took the blue ribbon and Messenger's Lady Farron captured the green. Grace Abbott, by Abbott Wilkes, Lady Brazilian and Bessie Pardner captured the fattest plums, respectively in their class.

Miss Woodburn, an Achille filly, led the way in the two-year-old class. I. L. Hartlen had the only entry, Cherry Blossom an Achille filly, in the one-year-old class.

D. R. Sutherland's Achille foal headed his class. An Achille foal also took third place while a foal shown by T. B. Messenger was sandwiched in between them in second place.

ROADSTERS—Achille colts figured quite extensively in the Roadster classes as well as in the standard bred class. With the exception of second and third prize monies in the three and two-year-old filly classes, third money in the one-year-old filly and matched team in harness classes, all the prizes being up for competition were captured. R. A. Corbett's fast trotting pair, Daisy DeWitt and Anita led their class. A full list of awards will be found on another page.

CARRIAGE HORSES—were few in numbers. Two brood mares and their 1909 foals were the only entries in their respective classes, R. A. Snowball's Jubilee Beauty and her foal by Warwick, captured the red ribbon in their classes. Two matched teams responded to the judges called, R. H. Melzter's pair, Kruger and Prince led the way, Harlten's black span capturing second money. All the monies for competition in the single horses to harness were awarded. Snowball's, Jubilee Beauty won the diploma for the best horse, any age.

PONIES—A few very nice ponies were exhibited. There was no competition except in the Shetland mare or filly class where Etta Fuller, of Truro, won the first place. Donald McCurdy of Halifax, was the other contestant.

GENERAL PURPOSE HORSES—Were a good useful lot. There is however much room for improvement in this class as much diversity of type appears. About one quarter of the prizes offered were not competed for.

HEAVY DRAUGHT HORSES were few in numbers, Wm. Sharp, Windsor, led the way in the yearling filly or gelding class, first with brood mare and foal of 1909 and first with two-year-old filly or gelding and won the diploma for mare and three of her get. The horses shown were mostly all Clydesdales.

HACKNEYS—R. A. Snowball, W. W. Black and Geo. R. Chipman, C. A. Webster and Roper Bros. exhibited Hackneys, Roper Bros.', Fashioner, captured the red in the aged stallion class. Chipman's, Sensation, took second money, Snowball's, Model Performer and Webster's, Sunburn, captured first and second, respectively, in the two-year-old stallion class.

Snowball's, Langton Lily, a winner of the first award on two occasions at the Royal in England had no competition in the brood mare class. Her foal of 1909 had no competition in his class, Langton Lily got the diploma for best mare and Model Performer, won the diploma in the stallion class.

C. A. Webster's three-year-old fillies Shiny Shoes and Good Friday, by Cliffe Rosador and W. W. Black's, Miss Violet captured first, second and third monies, respectively. C. A. Webster showed Firebrand, the only mare in the four-year-old filly classes

COACH HORSES—H. C. Jewett's aged stallion, Onyx, was the only Coacher at the fair.

PERCHERONS.—Frank Ellis, Whitenburg, N. S., showed Aubin, the only Percheron stallion at the fair. Chas. Symes had the only brood mare and foal of 1909. There were no entries in the other classes.

CLYDESDALES were the best lot seen at Halifax for some time. Six aged stallions appeared in the ring. After considerable deliberation the judge placed Lord Delmaney, P. C. Brown's horse, at the head of the list. H. C. Jewett's Sorbie Boy was put in second position, while C. R. H. Starr & Son's Baron Primrose stood in third position. Some of the horsemen, who stood around the ring, did not agree with Judge Reid in his decision.

Two stallions came forward in the three-year-old class. W. W. Black's Saxon Prince and Geo. B. O'Brien's Norseman were placed first and second, respectively.

W. W. Black with Amherst Lad and R. A. Snowball with Baron Belgradon were the only contestants in the two-year-old stallion class. Baron Belgradon led the way.

Three one-year-old stallions, shown by C. R. H. Starr & Son, Donald McIntyre and H. C. Jewett, won out in their respective order.

In the brood mare class Logan Bros.' Soubrette and Pink Rose captured first and third, respectively. Their foals stood in second and third place in their class to C. R. H. Starr & Son's foal of 1909, whose dam was second in the brood mare class.

R. A. Snowball had May Lothian, the only one in the four-year-old filly class.

C. R. H. Starr led the way in the three-year-old filly class. Snowball's Rosie Miller, the only other contestant, captured the second award.

W. W. Black's Bessie was the only filly in the two-year-old class.

Logan Bros.' Baron's Fancy and Princess May, imported in their dams, Soubrette and Pink Rose, where the only entries in the one-year-old filly class.

P. C. Brown's Lord Delmaney captured the stallion diploma.

Logan Bros.' Soubrette won a similar distinction in the female class, while Baron Primrose, C. R. H. Starr's horse, proudly stood at the head of the list with three of his get. The uniformity and quality of a stallion's get is, after all, the tell-tale that goes to show whether or not a stallion is of any consequence. Baron Primrose's colts are as even in quality and as much alike as three peas in a pod.

Beef Cattle.

There was no addition to the beef herds over those shown at the Fredericton Exhibition. H. S. Arkell, of St. Anne de Bellevue, placed the awards.

SHORTHORNS were shown by R. A. Snowball and C. A. Archibald. Both these herds were out in the pink of condition. The champion bull, Major Lewis, bred by C. A. Archibald, headed the Snowball's aged herd and was first in his class, without competition.

The champion female was in Archibald's herd. Archibald captured the first and second awards for best three animals, the get of one bull, with six good ones, sired by old Huntleywood.

Archibald also captured first and second monies for the best two animals, the progeny of one cow. He also pulled out two breeders' herds and captured first and second monies. The honor for the best graded herd also went to Mr. Archibald.

There was no competition in some sections, but where competition existed, although Snowball was a close competitor, Archibald captured the red ribbon in every case. Mr. Bennett showed the Snowball herd in good shape. The Bellevue herd shows that Mr. Archibald and his efficient herdsman, Mr. Douglas Burgess, have been feeding and breeding very carefully. Every animal in Mr. Archibald's Shorthorn herd was bred by himself. It is certainly a great credit to a man to be able to select and breed up such magnificent specimens as is found in the Bellevue herd. Any person, who has money enough at his command, can go out and buy exhibition winners, but to breed, feed and rear them so that their progeny will be winners, is where the stumbling block meets the average breeder. Mr. Archibald has seemingly mastered this art and his stock testifies to his ability.

HEREFORDS.—W. W. Black's Herefords were out in their usual good show condition, but met with no competition. We have so often commented on the creditable appearance of Mr. Black's white faces, despite the lack of competition, that to repeat the story, which is as true this year as previous occasions, would be giving our readers what the boys commonly designate a "chestnut."

BEEF GRADES AND FAT CATTLE.—W. W. Black had no competition in these classes and carried off the awards with stock good enough to win in keener competition.

DEVONS.—Chas. G. Pinkney and Wm. A. Pinkney, of Melbourn, Yarmouth Co., were on hand with two very fine herds of Devons. Their stock shows a vast improvement over former years and, undoubtedly, the tendency will be to bring them more in favor with the general public.

Dairy Cattle.

The battle royal of the fair concentrated in the dairy classes. The showing was one of the best ever made at Halifax and it is a regrettable fact that there was so much dissatisfaction with Judge Pier's decisions. It is hoped that the Commission will see their way clear to put an out-and-out Ayrshire man over the Ayrshire class and a Holstein man to judge the Holsteins, as the competition in these classes is becoming particularly keen. There was no dissatisfaction among the Jersey men, but they and the Guernsey men will look for a competent man to place the awards in their respective classes.

AYRSHIRES.—M. H. Parlee, C. A. Archibald, Easton Bros., McIntyre Bros., Retson Bros., Chas. Symes and John McDonald & Sons were out with their magnificent herds. McIntyre Bros., who did not approve of Judge Pier's awards on a previous occasion, placed their stock under him under protest. There was quite a scuffle in placing the awards and the Fredericton decisions were reversed in many cases. The stock shown was the same as shown at Fredericton, with the exception of the addition of Easton Bros.' and John McDonald & Sons' herds.

Easton Bros. led the way in the aged bull, senior yearling bull, senior yearling heifer, senior heifer calves, aged herd and breeder's young herd classes, as well as winning the diploma for best bull and three of his get. The various Ayrshire men in the ring did not agree with the placing of the first prize in the aged herd class. The award was seemingly placed on the strength of it containing the first prize aged bull, but the females did not begin to belong to the same class as those in some of the other herds. C. A. Archibald had the champion male, the two-year-old bull, Morton Main's Guerthrope, the only animal in Mr. Archibald's herd that was not bred by himself. In the contest for herd prize, accompanied by some females that stood higher in their class than those in the herd, awarded first money, as will be seen by our list of awards, he had to take third place.

M. H. Parlee had the champion female cow in Culcraigre Hilda II, shown in the aged cow class. In the herd contest she was accompanied by her mate, the second prize aged cow, the third prize three-year-old cow and the first prize two-year-old heifer. Although Lord Dudley, the aged bull at the head of the Parlee herd, only took third place in his class, there was not enough difference between him and the first prize bull to offset the standard of the females in his herd or put them down to second place. McIntyre Bros., with a second prize aged bull and some grand females, should have been within easy reach of first money, instead of outside its pale, as decreed by Judge Pier. We know the Easton Bros. will understand that we are not making any attempt at depreciating their aged herd. They had their stock out in grand, good shape and won quite extensively, but we do not believe the Ayrshire men could swallow the judge's decision on aged herds.

Easton Bros. led the way with Fizzaway's Heir and three of his get. The first prize on young herd went to Easton Bros. McIntyre Bros. came in for second money and C. A. Archibald captured third award. Parlee's champion cow also carried off the diploma for best cow and two of her progeny.

A full list of the winnings will be found on another page of this issue.

JERSEYS.—R. Robinson, Glen View Farm and H. S. Pipes & Son were the only exhibitors in the Jersey class, with the exception of C. T. Elderkin, who showed an exceptionally fine senior yearling heifer, on which he won the red ribbon, and J. E. Baker & Sons, who showed the second prize senior bull calf. Glen View Farm's aged bull, LaChasse Foxey, second in his class at Fredericton, led the way in the aged bull class and carried off the diploma for best bull, any age. H. S. Pipes & Son's bull, Brampton Financier, first in his class at Fredericton, went down to third position, while Blue Blood of Dentonia, third aged bull at Fredericton, mounted to second place.

H. S. Pipes & Son's Brampton Monarch's Ora, first in the dry cow class at Fredericton, led the aged cow class at Halifax and carried off the diploma for best female, any age. Hood Farm Bonnie, Robinson's champion female at Fredericton, was not in such high bloom and went to second place, but carried off the diploma for cow and two of her progeny. Glen View Farm led the two-year-old heifer class with Norwood Golden, second in her class at Fredericton. H. S. Pipes & Son's Blue Blood of Dentonia was first with three of his get. They also captured first prize on aged herd and first and third prizes on young herds. R. Robinson had the second prize aged and young herds.

GUERNSEYS —Roper Bros., Glen View Farm and H. W. Corning had the largest number of entries in the Guernsey class. M. M. Thompson had the second prize aged bull, J. A. McGee had the second prize two-year-old bull, John McDonald & Sons had the best senior yearling bull, the third junior yearling heifer and the second senior heifer calf. Roper Bros. captured the lion's share of the red ribbons and won the diplomas for champion bull, champion female, bull and three of his get and cow and two of her progeny. Glen View Farm had the third prize aged bull, first prize two-year-old bull, first junior yearling bull, second senior calf, first junior bull calf, first three-year-old cow and a number of second and third prize winners in the other sections. H. W. Corning had an exceptionally fine and strong senior bull calf that carried off the red ribbon in his class and headed the first prize breeder's young herd. Corning also led the way with Dairy Maid of Hillside in the two-year-old class. Corning's Bonnie's Image of Hillside and Columbine's Image of Hillside captured the red and the blue in the junior calf section. The third prize senior calf and the second prize junior yearling heifer as well as the third prize senior yearling heifer were shown by Mr. Corning.

HOLSTEINS.—Logan Bros., Samuel Dickie and J. D. Irvin were the principal exhibitors of the black and white beauties. M. M. Thompson, of Shubenacadie, showed a junior yearling bull on which he won the red ribbon. The remainder of the animals in the ring had met during the previous week at Fredericton, but evidently Judge Pier's decision did not coincide with Mr. Stevenson's decision. Dickie's aged bull, first in his class at Fredericton, went down to second place at Halifax and was sandwiched in between Togo Rooker and Lord Albion Wales, Irvin's herd headers. Logan's two-year-old bull, Mercena Vale, champion male at Fredericton, had no competition in his class, nor was he destined to carry off the championship honors for Judge Pier placed this coveted award on Irvin's Togo Rooker. Samuel Dickie's Helbon DeKol's Prince was the only senior yearling in the class. Logan Bros. took first and third in the senior bull calf class and second and third in the junior bull calf section. Samuel Dickie and J. D. Irvin captured the remaining prizes in these sections.

In the aged cow class Samuel Dickie's Locust Hill Nellie III, first in the dry cow class at Fredericton, again mounted to the front and carried off the diploma for the best female, any age. Logan Bros. captured second and third places with Clothilde Dorinda and Mary Rooker II, first in the aged milch and dry cow classes, respectively, at Fredericton.

Minnie Rooker's Poem, Logan's champion female at Fredericton, was again first in the three-year-old class. Brookland's Louise DeKol was the third and Dickie's Blahe Lahonda stood in second place.

Logan Bros. captured the red and the green in the two-year-old heifer class with Tanta Rooker II and Artis Juba Oatka. Irvin came in for second money with Minnie Burke.

Logan Bros. had the third prize winner, Empress Concordia, in the senior yearling and the first prize winner in the junior yearling classes. They also captured all the prizes in the senior and junior calf classes, as well as first prizes and diplomas for best cow and two of her progeny, and for bull and three of his get. The first prize for aged herd and the first and second prizes for young herds also went to their lot, which makes an enviable record in such good company.

GRADE JERSYS AND GRADE GUERNSEYS were out in fairly large numbers. Roper Bros. and Allison McDonald had the first and second prizes pretty evenly divided. D. Adams took most of the third prizes and a second in the one-year-old heifer class.

GRADE AYRSHIRES AND GRADE HOLSTEINS were strong classes in the hands of McIntyre Bros., John McDonald & Sons and Eddy Tupper. McIntyre Bros. won two first prizes, five second prizes, four third prizes and two fourth prizes in this class. Eddy Tupper won four first prizes, one second prize, one third prize, one fourth prize and a diploma for best cow and three of her progeny. For list of other winnings see prize list.

Sheep.

The sheep classes at Halifax were filled with the cream of the Maritime Province flocks and foolish, indeed, would be the Maritime man, who would pass these flocks to go further afield for good stuff. He could not find better anywhere. The stock was well fitted and shown in a condition that did credit to the owners and to the respective breeds. H. S. Arkell placed the awards.

LEICESTERS.—Burder Goodwin, Albert Boswell, S. L. Boswell and Retson Bros. were the only exhibitors in the Leicester class. The competition was keen, but the highly fitted Boswell flocks carried off the lion's share of the premiums.

COTSWOLDS.—H. W. Corning and H. H. Churchill were the only exhibitors in the Cotswold class. They had their stock in the pink of condition.

LINCOLNS.—Chas. Symes, Albert Boswell, Jr., and Geo. L. Boswell had three very fine flocks of Lincolns. All the first prizes went to the Boswell flocks. Symes has good stuff, but his flock was not so highly fitted nor as uniform as the Boswell flocks.

SHROPSHIRES.—Logan Bros. and Geo. L. Boswell had two highly fitted flocks of Shropshires. The honors were pretty evenly divided.

SOUTH DOWNS.—Two grand flocks of these big little sheep were shown by J. E. Baker & Sons and Cephas Nunn. In all classes where there was competition, except in the ewe lamb class, all the first prizes went to the Prince Edward Island flock.

OXFORD DOWNS.—J. E. Baker & Sons had their magnificent prize-winning Oxfords. Burder Goodwin was their only competitor. He won third money on shearling ram, ewe, two shears and over, first on shearling ewe and second on ewe lamb, aged pen, young pen and pen of four lambs, either sex. All the other prizes went to Baker's flock.

HAMPSHIRE DOWNS.—Cephas and Oliver Nunn had enough good Hampshires to capture nearly all the money hung up in their class.

CHEVIOTS—Henry Lethead and Chas. Symes waged the battle royal with their Cheviots. Leithead won all the firsts, with the exception of that in the ewe, two shears and over class, where Symes made a clean sweep of first, second and third. Symes was also a close second and third in the other classes.

DORSETS.—H. W. Corning was the only exhibitor of Dorsets. He showed some nice ones in the shearling ram, aged ewe, sharling ewe, ewe lamb and pen sections.

GRADES were a good lot and the kind that would make money for their owners. They showed the ideal that any farmer may attain by using pure bred sires on their common ewes.

Swine.

The pure bred classes of swine was not up to previous years in quality or quantity. The grade classes were well filled.

BERKSHIRES were almost at the vanishing point. This class used to be very strong on previous occasions.

YORKSHIRES were shown by H. H. Churchill, who won the lion's share of the awards, and A. J. Nicholson, Roper Bros. and C. J. Keeler. See list of prize winners.

CHESTER WHITES were very few in numbers. There was no competition in any one class and the quality was not up to the usual standard.

POLAND CHINAS.—Chas. Symes was the only exhibitor in this class. He had some good ones.

TAMWORTHS.—Roper Bros. showed some good Tams, but had no competition.

DUROC JERSEYS.—The competition in this class was keener than usual. J. E. Baker & Sons captured most of the awards.

Poultry.

The poultry classes were fully fifty per cent. short of what they were a year ago, but as a rule, the quality was excellent. Barred Rocks were the strongest sections and competition was very keen, particularly in the cockerel and pullet classes. The competition in the other classes was not very strong, although the individual breeders in the respective classes showed some excellent specimens that only thoughtful, careful breeding could produce. Judge Smith, of Hillgrove Poultry Yards, Waltham, Mass., placed the awards to the entire satisfaction of all concerned. His placings will be found on another page.

Rules for Feeding.

Professor C. H. Echles, of Wisconsin Experimental Station, says :

"It is possible to feed a bunch of cows economically only when they are fed as individuals and not as a herd. A too common practice, even in the otherwise well conducted herds, is for all animals to be fed the same amount of grain regardless of the period of lactation or the quantity of milk individnal cows are producing. Such feedling always lacks economy, as the high producing cow does not get enough, and while she may milk very well for a short time, she soon comes down to a lower level, while the lighter producing cow gets too much and accumulates fat.

"The following rules regarding the amount to feed cows covers the case fairly well :

"1. Feed all the roughness they will eat up clean at all times.

"2. Feed one pound of grain per day for each pound butter fat produced per week, or one pound grain daily for each three pounds of milk.

"3. Feed all the cows will take without gaining weight.

The rule regarding the amount of grain to feed per day for each cow applies best when based upon the amount of butter fat produced per week, as this makes it applicable to any breed. The second part of the rule in regard to feeding one pound of grain for three pounds of milk would not work out in all cases, since in a heavy milking Holstein cow this gives a little too large a quantity of grain, and with a Jersey, giving very rich milk, it is a little too low."

Help for those who have Stomach Trouble.

Arter doctoring for about twelve years for a bad stomach trouble, and spending nearly five hundred dollars for medicine and doctors' fees, I purchased my wife one box of Chamberlain's Stomach and Liver Tablets, which did her so much good that she continued to use them and they have done her more good than all of the medicine I bought before—SAMUEL BOYER, Folsom, Iowa. This medicine is for sale by all dealers. Samples free.

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THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser be said :—**"I saw your adv. in the MARITIME FARMER."**

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VOL. XV NO. 1.

We have passed the fourteenth milestone in our history and with this number we introduce to our readers volume XV. We have received much material assistance from our most progressive readers; the assistance and instruction they have thus so willingly brought to their fellow men is best known to those who have been benefited. The future looks bright with promise for the MARITIME FLRMER. Our subscription lists have been augmented by leaps and bounds and like a mighty octupus the MARITIME FARMER is extending its influence into the highways and by-ways of the Maritime Provinces. With this increase in circulation, we have extended our bounds into farm hands where no farm literature was previously read and the letters of appreciation we receive is a sure indication that the class agric ultural is fast awakening to a sense of the magnamity and importance of their calling. The story of successful farming experience is never old. It is always new, inspiring and refreshing. "The greatest good to the greatest number" is the MARITIME FARMER'S motto. The important truths, those we need to dwell upon are: "The truths already known to everybody." The fact that we all know the truth doesn't make the truth less important. It is more important because it is more firmly established. Hence the importance of relating experiences for the benefit and guidance of our fellow men. The man who thinks he knows it all is as bad off as a castaway on some lonely isle—stranded on the island of self satisfaction, entirely surrounded by oceans of obliviousness.

The man who shuts his eyes and stops his ears to every idea except those that he himself originates, get to be old fogeyfied and ridiculous. He's isolated, cut off from all the world. The up-to-date methods used by the other men never come under his observation.

Get in line for better conditions and more prosperity and help along the great movement by reflecting forth rays of agricultural knowledge, that may have benefitted you. Have you been particulary successful in any lines of your farming operations? Relate how you accomplished results for the benefit of your fellow men. It will help the other fellow; you yourself will profit by so doing and it will make Volume XV more useful and helpful than any of its predecessors and will be the means of bringing along the happy, millenium in agricultural pursuits when each and every Maritime farmer will be farming at a profit. We look to our readers to help along in this noble cause. Will you do your part?

THE BOY EXHIBITOR.

The inborn principle of ownership is one of the first properties of child mind that is manifiested. This does not naturally grow less as the child grows older, but rather becomes more fixed and set in its nature as it learns to recognize and enjoy its possessions. Here is the beginning principle of creating in the boy a pride to excel in the things that he recoginzes as his own. The child that grows up to appreciate ownership in the toys and playthings of childhood and is forced to relinquish all these as he passes into boyhood and is given nothing to take their place, soon looses confidence in humanity and active interest in the things about him that others are interested in owning.

There is a natural instinct in the child to own, to possess things, and this is manifest at a very early age. It is said, in explanation or emphasis of advantage, that possession is nine points in law. It is everything with the child. That there is not sufficient attention or encouragement given the boy at home in becoming an independent owner and producer of stock and crops there can be but little question. The boy should not only be made an owner or part owner in some branch of livestock on the farm, but he should be encouraged to take an interest in the production of some crop or crops.

One of the best incentives to labor, attention and interest in the affairs of the farm is the encouragement that the agricultural and live stock fair offers. The boy that can have the opportunity and encouragement of becoming an exhibitor at the county or provincial fair, in some department, if it is only exhibiting a pair of bantam fowls or a few vegetables or samples of grain he will at once begin to think more of himself and measure his importance with the magnitude of the enterprise and the people he is associated with.

County, district and provincial fairs should all recognize the importance of getting the boys and girls interested in those lines of exhibits most suited to their tastes, inclinations and abilitiy to produce and exhibit. It is not right that the boys and girls be obliged to compete in classes at these fairs with the grown people, the old, skilled producers and exhibitors A boy's and girl's department should be provided in every fair and the boys and girls early encouraged to become exhibitors.

The local seed growing contests that have been organized by the Canadian Seed Growers Association are doing a grand work along this line of education. We must recognize in the boy the coming farmer, the man of future, the hope of our county and nation.

All boys need encouragement and the boy on the farm is no exception simply because he has all the bodily comforts of plenty about him. The solution of the farm labor proposition is to come from an increased number of farm owners by keeping more boys on the farm. By this is meant the creation of an early boyhood interest and attachment for the things of the farm, and the ownership interests it is capable of offering him.

THANKSGIVING.

Thanksgiving approaches. Before another issue of the "FARMER" reaches our reader Thanksgiving Day, will have passed and gone, the Governor and Council having decided that Monday, October 25th, shall be set aside as a day of thanksgiving to benign Providence for the bountiful harvests and blessings we have enjoyed during the past year.

The fulness of the harvest has been realized. North, east, soath and west there is the glorious fruition of the promise of seed time. It is fitting that there should be set aside a day of thanksgiving, a day of rejoicing. Human nature is always better for a free expression of its finer qualities, suppressed emotion is deadening. Throughout this great land there is one common joy—the joy of the great harvest. The laborer, the mechanic, the merchant, the manufacturer, every man, whatsoever his calling, has for months had his eyes on the ripening crops, as well as the farmer, and now is rejoicing. Why not give this universal spirit expression? Why not harvest festivals throughout country and town which shall bring together each several neighborhood. What an inspiring expression of the true spirit of thanksgiving it would be!

At this season, when the crops are safely housed in the barn, we look back on the past year with a feeling of thankfulness. This year we have cause for rejoicing. Our country is growing in prosperity, and is daily adding to her population. Slowly, but steadily, the tide of immigration has turned our way, until to-day Canada's population is increasing by leaps and bound. The fertile prairies of the West are making many men independent and their own masters, who, had they stayed in the old world, would have continued servitors till their death. There is much land in our own provinces that contains acres upon acres of fertile farm land, waiting for settlement. All over the country we see activity in every line of enterprise, the factories are running full time and are crowded with orders. The farmers are now threshing good crops, prices are good, and the demand for Canadian farm products in Europe is most encouraging. The railroads are improving their main lines, throwing out branch lines, and adding to their rolling stock and equipment, and this is a good sign of the prosperous needs of the country.

Almost every day we hear of discoveries of minerals, commercial ores, or precious metals. These, too, will add their quota to the future of Canada, and make her a commercial power. We have a country that is blessed with many great, natural advantages, fertile soils and abounding in mineral wealth that is yet to be uncovered. We can grow almost anything, from tender fruits up to hard wheat. Therefore, we must strive to the utmost of our power to develop and improve our resources, and husband them, so that they may continue a source of national wealth. With such a prosperous year behind us, let us hope that the following years may bring us many more seasons of thankfulness and peace in this fair Dominion.

What a beautiful spirit it is which animates and lightens up these dull October days—the spirit of thanksgiving and rejoicing over the year's fruition. There is a certain little community which has adopted the custom of celebrating this October holiday by means of a harvest festival, a festival which brings together in joyous assembly all the neighborhood. Is it not a splendid idea?

Thanksgiving is now less than two weeks away. What are you going to do to make it memorable? Why not a universal adoption of this idea of a Thanksgiving or harvest festival? What an inspiration it would be to know that all over this broad land the people were united in celebrating the completion of a season's labor, and the reaping of a just reward!

"Sweet is the breath of a vernal shower,
The bees collected treasures sweet,
Sweet music's melting fall,
But sweeter yet the still, small voice of gratitude."

But why have that voice still and small? Why not a mighty, nation wide expression of the rejoicing which Thanksgiving day typifies? What a splendid chance for the Institutes and the other organizations of our farmers to bring together the people of their several neighborhoods for a celebration befitting the season.

Let us make this coming Thanksgiving a memorable one in every way. Plan to make it a Thanksgiving which shall stand forth from among other Thanksgivings. There are nearly two weeks in which to plan for it. Make it a day of days, and then write us about it. Tell us just what you did. Give us your programs. Share your good time with others by telling others all about it through these columns.

The Prince Edward Island Exhibition.

The 1909 Prince Edward Island Interprovincial Exhibition was held, in Charlottetown on, September 21st to 24th inclusive. Although inter-provincial in intent there was little or no competition from outside the Island province except in the poultry and fruit classes. This may be accounted for by the fact that the breeders on the mainland had their live-stock at Fredericton when the Island fair opened and as the Halifax fair opened one day after the New Brunswick exhibition they could not very well cross the straits, and consequently the fair was wholly an exposition of Island production. The natural tendency then would be towards a smaller fair than in years gone by. The showing made in the respective classes was very creditable indeed and made up in quality what was lacking in quantity. The weather throughout the fair season was more like July than late September weather and the attendance was up to the most sanguine expectations of the management. C. R. Swallwood, the genial secretary, was at the helm cheerful as usual and doing his level best to have every department running as smoothly as possible.

The formal opening took place on Tuesday, September 21st, at one o'clock P. M. The speakers of the occasion were His Honor Lieutenaut-Governor McKinnon, Mr. Justice Fitzgerald, President of the Exhibition Association, Sir Louis H. Davis, K. C. M. G., Hon. Frank Deedmeyer, American Consul, Premier Haszard, Hon. John Richards, Commissioner of Agriculture and C. C. Gardner. A spirit of optimism and patriotism prevaded the various addresses.

Mr. S. J. Moore of Truro, judged the grains, roots and vegetables, the competition was not so keen as in former years, but the quality was excellent.

Mr. R. W. Starr the veteran fruit judge of Port Williams, N. S., placed the awards in the fruit classes. The display, although not very large, was full of quality and an indication of what Island fruit growers, who follow modern methods of caring for their trees can produce. The fruit was well developed, well colored and clean. An interesting feature in connection with the fruit department was a practical demonstration of packing apples for export by Mr. Fred G. Earl of Litton, B. C., who is visiting the Maritime Provinces under the auspices of the Fruit Division, Ottawa, for demonstrating to fruit growers the desirable pack in box and barrel.

Mr. Harvey Mitchell of the Dairy Division judged the Dairy Products. Following is a summary of his report:

"There was a very creditable display of creamery butter and factory cheese. The quality was fully up to that of previous years. The quality of the private dairy butter shown, taken as a whole, was not as fine in quality as I have seen here in the past. "The importance of having iced show cases for the butter exhibit should be considered by the committee in charge before another season."

The Horses

Dr. J. Watson of Howick, Que., judged the light classes, and Mr. Thos. McMillan, Seaforth, Ont., judged the heavy classes. The horse show at Charlottown attracks much attention from the outside world and not a few buyers go there to locate desirable horses. The prices asked for good horses should make farmers look to the horse raising industry as a regular goldmine if they breed to a definite-type and cling to high ideals.

THOROUGHBREEDS.—Some nice filies in the three-year and two-year-old classes were the only exhibits in their class.

CARRIAGE HORSES.—The judge recommended that as there is no Roadster class at Charlottown and as horses that are good Roadsters but not ideal Carriage horses predominate and are shown in the Carriage class that a roadster class be substituted in place of the carriage class. Eastland, owned by H. R. McLellan, St. John, N. B., led the aged stallion class. Oakley Baron, W. S. McKie's Standard Bred took second money and Baron Ideal, shown by J. A. Cameron took third money. Only two three-year-old stallions were shown. The year-old stallions were out in stronger numbers and so were two-year-old fillies. There were only two entres in the three-year-old filly class. All the other sections of this class were well filled with horses of good roadster action and type. Eastland captured the special prize, bronze medal, offered by the Canadian Bank of commerce for the best carriage stallion, mare or gelding in the Carriage class.

SADDLE HORSES.—Only two entries put in an appearance in each of the gentlemen's Saddle Horse and Ladies' saddle horse classes.

HACKNEYS.—Roper Bros., Fashioner, led in the aged stallion contest. W. Moffatt's, Island Swell, took second money. Mr. Moffatt also had a nice 1 year filly that captured Mr. John B. Roper's special for the best colt or filly, one-year-old by Fashioner.

A. A. McBeth and R. E. Longworth captured second and third places in the latter contest. A. Boswell, R. E. Longworth and Silas Prowse were the successful winners in a similar contest for foals of 1909 by Fashioner.

CLYDESDALES AND SHIRES — were shown in the same class. The former were strong in numbers, and of good quality. P. S. Brown's Lord Delmaney captured the coveted red. Wigton Hero owned by the Head St. St. Peter's Bay Clydesdale Co., came in for second money while Daniel McGregors' Shire Eskham Waggoner, took third award. John Richards had the only entry in the three-year-old stallion class and captured the diploma for best stallion any age. He also had the only two-year-old filly, which also captured the diploma for female any age.

DRAFT HORSES—The draft horse class had strong competition in every section, and showed horses of excellent conformation and type and a fitting object lesson of what may be accomplished by the use of pure herd sires on grade mares. A great deal of money goes to Island horsemen every year for horses of this class. The Steam Navigation Co's. special prize for the best four draft colts, under three years old, the get of any one registered draft stallion was captured by R. B. McKinley with four Crown Rights colts.

GENERAL PURPOSE HORSES— were also out in large numbers. It would be a difficult matter to find so many useful mares together as was seen at Charlottown; mares of strong conformation, and good active action. This was certainly a class that would attract the attention of any persons interested in light agricultural horses.

Beef Cattle.

The beef class at Charlottetown reached a very low ebb. A three-year-old bull shown by John Walker and a two-year old bull shown by Samuel C. Lane were the only pure bred Shorthorns on the grounds. A few grade females and two pair of steers made up the remainder of the beef class exhibit. J. M. Gardhouse, Weston, Ont., placed the awards.

DAIRY CATTLE.—Ayrshires, Jerseys, Guernseys and Holstein-Friesians and their grades were out in good shape and in fairly large numbers. The numbers of new beginners in pure bred stock line is a strong indication of an awakening interest in modern dairying and of the ascendency of the dairying industry in Prince Edward Island. A. C. Halman, of Breseau, Ont., placed the awards.

AYRSHIRES.—Easton Bros., and Simmonds Bros., had the largest number of entries in the Ayrshire sections. The Easton herd was out in excellent fit and won the lion's share of the awards. They captured all the first prizes on bulls of all ages with the single exception of the senior calf class where Simmonds Bros., had no competition. Simmonds Bros. captured the coveted red in the yearling heifer and junior calf classes, while a similar award in the senior calf class went to Robert Stewart. All the reds in the remainder of the classes were captured by Easton Bros. This included first aged herd, first breeder's young herd and champion bull. Their two-year-old Howie's Crusader and champion female Pearl of Springhill shown ih the aged cow class. Chas. Weatherbie showed the third prize aged bull. W. Moffatt had the second prize two-year-old bull and Ray Bulpitt captured a similar prize in the one-year-old bull class.

JERSEYS.—William Clark had the largest number of entries in the Jersey class. He was out with his stock in a condition that would stand some keen competition. His aged bull Dreadnought of St. Lambert was the champion male, while his aged cow Cana Meines of Maple Grove won a similar distinction in the female class. The awards for aged herd and for breeders' young herd went to Mr. Clark without any competition. Frank Glydon, Wallace Stead, Spurgeon Warren and James Essory were the other Jersey exhibitors. Mr. Stead won first award in the bull calf classes and in the yearlIng heifer and junior calf classes. James Essory had the best yearling bull and the second prize two-year-old heifer. Frank Glydon won the second prize in the aged bull class.

GUERNSEYS.—Roper Bros. and James Roper won all the awards in the Guernsey class with the exception of second prize on junior bull calf and first prize on senior heifer calf. Roper Bros. had a strong line of Guernseys at the fair despite the fact that the cream of their herd was away at the Fredericton exhibition.

HOLSTEIN-FRIESIANS. — There was some keen competition in the Holstein classes. Each succeeding year a marked growing interest in the black and whites at Island fair is noted before. This is particularly obvious when one looks at the variety of names in the bull class exhibitors' list, a fact which accounts for the strong showing of Holstein-Friesian grades.

A glance at the list of awards will show the names of the prize winners.

Gavin Harding and Fred C. Clark had matters pretty much their own way in the female classes. Gavin Harding's Jewel Sylvia, champion female at Toronto, Sherbrooke and Halifax in 1907, with a record of 90 pound milk per day on the Toronto fair grounds, while a member of Logan Bros'. herd won the first award in her class and female championship at Charlottetown. F. C. Clark's Johanna Mercines Posch won the coveted red in the two-year-old cow or heifer class. Harding won first award in the aged herd class, first on breeders' young herd and first on his aged bull Artis Jake and three of his get.

Fred C. Clark's Jacoba Johanna was first in the class for cow, any age, and two of her offspring. The other exhibitors who came within the money's pale there in the female classes were E. Heartz, J. M. Leard and W. J. Gibson.

Although every one of the Holstein exhibitors were practically new beginners they made a very creditable showing and when their herds increase in numbers we will expect to hear from them at fairs outside their Island domain.

DAIRY GRADES—Were a good, useful lot, indeed, there were some grades that would pass muster for pure breds. A full list of awards will be found on another page. Fred C. Clark won the Holstein Fresian Association's special prize, Silver Cup, for the best grade dairy cow sired by a registered Holstein bull.

Sheep.

Prince Edward Island is noted for its flocks of sheep and the Charlottetown exhibition is where one can see them at their best. Leicesters, Cotswolds, Lincolns, South Downs, Shropshires, Oxford Downs, Hampshire Downs and grades of the above mentioned breeds were out in excellent fit. Mr. J. M. Guardhouse who placed the awards spoke very highly of the excellent quality of the respective flocks. He was particularly strong in his acclaim of the Leicester class, a better lot of which he had never handled.

Swine.

Mr. A. C. Halman, who judged in the dairy classes also judged the Swine classes. Berkshires, Yorkshires, Tamworths and Chester Whites were out in fairly large numbers. It has been quite customary in years gone by to find one breeder taking all the fattest plums in a particular class. A glance at the list of awards at this year's fair will show that not one breeder had a cinch competition was keen; the quality throughout the whole was very even and the monies were pretty well divided. The breeders were out to win and no one had a monopoly of his particular class.

Poultry.

J. P. Landry, Superintendent of the Poultry Department at the Truro Agricultural College placed the awards at Charlottetown in his usual efficient manner, No favor wins and no fear awes," is his motto and wherever he comes across a disqualification he invariably lets the axe fall, and it makes no difference to him whither the exhibitor likes it or not. He judges the birds on their merits not on the merits of their owners. The Barred Rocks, Brown Leghorn and White Leghorn classes had the most competition and Cirds of excellent quality were shown. White Wyandottes were a particularly good lot but there was no competition. Charlottetown also has its quota of poultry men who pick up specimens of almost every variety in the standard but who cannot furnish a bird or a setting of eggs in the breeding season.

The Ladies Work and Fine Arts exhibits were fully up to the standard of other Maritime fairs and shows that the thrifty wives and daughters of Prince Edward Island know the arts that tend to the comforts of home life.

Charlottetown Prize List.

HORSES.

CLASS 11.—THOROUGHBREDS.

Filly, 3 years old and upwards, 1, Daniel McDonald; 2, Robert E. Longworth; 3, A. McKenzie.

Filly, 2 years old, 1, W. W. Owen.

CLASS 3—CARRIAGE HORSES.

Stallion, 4 years old and upwards, 1, H. R. McLellan, Eastland; 2 W. S. McKie, Oakley Baron; 3, J.A. Campbell, Baron Ideal.

Stallion 3 years old, 1, Duncan Robertson; 2, John Stewart.

Stallion 2 years old, 1, John Ford; 2, J. H. Nantes; 3, Daniel N Taylor.

Filly 3 years old, 1, Alex. Kennedy; 2, D. W. White.

Filly, 2 years old 1, Wm. Auld; 2, John, J. McLeod; 3, Geo H. Reddin.

Filly, 1 year old 1, Bessie Stewart; 2, Harry Weeks; 3, A. A. McBeth.

Foal of 1909, 1, Bagnell; 2, Albert Boswell; 3, Robert E. Longworth.

Mare with foal at her foot, 1, Albert Boswell; 2, Robert E. Longworth; 3 Silas Prowse.

Mare or Gelding, 15½ hands or over, shown in carriage, 1, R. J. Steele; 2, A. A. McBeth; 3 Geo, Handrahan.

Mare or Gelding under 15½ hands, shown in harness, 1, E. R. Reid; 2, Claire E. McMillan; 3, H. R. Hilson.

Special prize, for the best carriage stallion, mare or gelding in the carriage class, offered by the Canadian Bank of Commerce, Bronze medal, H. R. McLellan, Eastland.

CLASS 4.—SADDLE HORSES.

Gentleman's saddled horse, gelding or mare, not less than 15¼ hands, Diploma, William McKinley; 2, A. A. McBeth.

Lady's saddle horse gelding or mare, not less than 15 hands, Diploma, P. Moore; 2, Claire E McMillan.

CLASS 5.—HACKNEY HORSES.

Stallion 3 years old and upwards, 1, Roper Bros, Fashioner; 2, W. Moffatt, Island Swell.

Filly, 1 year old, 1, W. Moffatt.

Special prizes given by Mr. John, B. Roper, Charlot etown Royalty.

For the best Colt or Filly, 1 year old, sired by Imported Hackney Stallion "Fashioner," 1, W. Moffatt; 2, A. A. McBeth; 3, R. E Longworth.

For the best foal of 1909, sired by "Fashioner," 1, Albert Boswell; 2, R. R. E. Longworth; 3, Silas Prowse.

Continued on page 17.

HORTICULTURE

Horticulture at the Nova Scotia Provincial Exhibition.

A fine display of fruit was made at the Halifax show. During the past year the early date made it impossible to show apples in anything like shipping condition, and the interest of fruit growers of the Annapolis Valley has been drawn away from the Provincial to their own district exhibition. The distance from the fruit centre also cuts off small exhibitors who can not afford the time or expense to enter a few plates. Again the prize list has been cut down so there is but a small amount to compete for and after all it is money the most of us are after. In these days of deficits it seems useless to ask for more money for fruit in the prize list, yet it seems to have some peculiar features. Prof. Robinson told the agriculturists some years ago, that the Nova Scotia hens produced more than the orchards, that may be true, and perhaps it is a good business to make a large prize list for poultry, however, the fruitmen think, when ornamental fowls including pigeons, canaries, guinea pigs and rabbits can secure a prize list of $257.00, that more than $105.00 might be squeezed out for apples. The offerings for single plates of apples is but $77.00 while prizes on canaries alone total $77.00 and pigeons about as much more. The Dominion Fruit Division say that Nova Scotia produced and sold 675000 of apples last year, netting about $1,500,000, so the canary business must grow some to catch us.

The county collections were all good. From Kings three good lots graced the centre table. A. C. Starr of Port Williams got first, with A.C.Johnson a close second. J. H. Cox of Cambridge, had a nice display and got a third prize ticket. From Hants County came three fine lots of handsome apples. Mrs. Sangester of Falmore, got first place, with C. A. Dill of Windsor, second, Annapolis also had three competitors. Mrs. T. B. Messenger, Byron Chesley and C. Young, getting prizes in the order named. Halifax County had three competitors, G. N. McKeen of Gay's River, as usual winning first prize. R. MacAloney, Provincial Cashier, brought in a nice collection from his gardens near Halifax. It cost Mr. MacAloney $1500.00 to clear an acre of land from stones so we can appreciate his enthusiasm in Horticulture. Lunenburg County had five collections fully up to the Annapolis Valley stuff in size, though a little off in color and showing lack of experience in selection. W. A. Hebb of Bridgewater got a first prize, and J. Wentzel of New Germany, won a good second. Geo. F. Anderson of New Annan, Colchester Co., had a fine show, fair size, good color, well grown and selected. Cumberland and Antigonish were represented by two and five collections respectively, none of these showing above the medium.

Exhibits of single plates were very fine, competition running very close in many classes. Pears and plums were in abundance and of very fine quality. Some nice plates of peaches were shown and a few nice lots of cranberries.—S. C. P.

Obtains Results.

E. H. Perry, a scientific fruit grower, of Manchester, N. Y., two years ago set out an apple orchard of 1,400 trees to be cared for under new methods which would hasten the bearing of the trees and also produce better fruit. Mr. Perry expected to raise a crop of apples in five years, and a full crop in seven years, while under the old method about twenty years elapsed after setting out an apple orchard before a full crop was harvested.

Mr. Perry states that this plan of growing apples, he knows, after two years, will be a success for the reason that apples were picked from a large percentage of the trees this fall after having been set out only two years, and when he was not expecting a crop so soon.

He states that he has been making a study for many years of apple growing and his aim is to produce a single stock tree from which there will be no prongs running from the trunk, with the idea that more fruit will be raised of a good quality from the one stalk tree than from the usually formed tree.

Mr. Perry says that no first-class apples will grow more than a foot away from some outside portion of a tree and that it requires as much sap for a large centre of a tree as it does for the outside which bears the first-class fruit. Much of the energy that should go to the fruit goes to the growth of wood on the inside of the tree, and this newly planned tree will have far greater surface near the outside, considering the centre that it has to suppport, than the apple tree that is grown in the ordinary manner.

Mr. Perry's orchard, which bore fruit the second year, was set from two-year old stock, and after the trees were set men passed from tree to tree with pruning knives cutting off the top and a portion of the trunk, leaving a piece about a foot high protruding from the ground.

Of this new method of growing apple trees it is said that the flow of sap is so much greater that the tree will mature younger, and the fruit will be of such a quality that it will bring double the market price paid for ordinary fruit.

Mr. Perry's study of scientific tree growing teaches him that to build a tree in the old manner is wrong, as it requires too much pruning in the centre of the tree, stops the flow of the sap and is to a great extent the cause of disease in the tree. As such pruning will be unnecessary in the single stalk tree, the principal part of the tree's energy will go to the fruit and not to the top.—American Fruits.

Tree Surgery.

What is tree surgery? In so far as it applies to the cement work alone a good answer would be that it is the practical application of dentistry to trees, says Cement Age. But the answer would not cover the many other branches of the profession, consisting of trimming, chaining, packing, scraping, spraying and fertilizing. Tree surgery is, in fact, an advanced development of arboriculture. Both fruit and shade trees are valued now as never before, and the fact has become generally known that by skillful methods of the tree surgeon it is possible to give a new lease of life to trees which apparently had reached their limit of existence. It is safe to say that almost any tree of medium age may be saved by these methods. Of the many branches embraced in this work cement filling forms by far the largest and most important part. The practice of filling cavities with cement has long been in use, but when carried out along the usual lines it only serves to add to the original trouble. The method of sealing up the decayed section simply increases the decay. Many examples may be seen where the bark at the side of the cavity was covered by the cement, no regard having been paid to drainage or the subsequent healing of the wound. As the cement did not stick to the wood and the swaying of the tree by the wind often enlarged the crack between the wood and the filling, water penetrated behind the cement, and decay went on even more rapidly than before.

The tree grows in girth by the deposit of a thin layer of new wood between the wood and the bark. There are three layers in this coat—the middle one being composed of thin forming tissue known as the "cambium." The inner side of this layer forms new wood, the outer new bark. It is this new layer and the layers of the four or five previous years which are known as the sapwood, and from the active section of the trunk and branches. The cells of these inner rings are gradually covered by the yearly deposit of new growth, and from living sapwood becomes heartwood, which is dead and serves merely as a strong framework for the living parts of the tree and storehouses for excess material.

This is the reason why hollow trees may often be found in a flourishing condition when the heartwood may have entirely disappeared. However, a landscape tree in this condition, deprived of the shelter of its fellows, is in grave danger, for a high wind or a heavy snowfall may find it an easy victim.

After the mass of decay has been removed from the interior of a rotting trunk there remains a shell of living sapwood and bark. Now comes an important operation, the cutting of the watersheds, which gives to the tree a stability which by the decay of the supporting heartwood it had lost. In this cavity a steel brace is inserted and bolted in place. This gives the entrance of moisture The watersheds consist of a deep groove cut about an inch inside the edge and opening to the ground below. The cement being packed tightly into these grooves, forms a channel down which the water flows, to be led out at the base. The cavity is then wired throughout, the wire being stretched from nails driven into the wood, and acting as reinforcing for the cement. This work having been completed, the cement is made as moist as possible, and then built into the original outline of the tree. The bark which has been cut back for an inch or so in order to prevent bruising while the work is in progress will eventually cover the filled in wound, the tree thus regaining its normal appearance.

In the case of exceptionally large cavities the opening is covered by large strips of zinc. The cement is then forced down into every crevice and allowed to set, after which the zinc is removed and a coat of fine finishing cement put on and painted the color of the bark. By this method the tree surgeon is enabled to build out trees where fully half the wood may have been destroyed by lightning or some other cause. This treatment serves as a fine example of the healing powers of nature, for it is remarkable how quickly these wounds will heal when protected from moisture and further decay by the cement filling insured by the watersheds.

Is it Wise to Dip Nursery Stock?

NURSERY STOCK DISTRIBUTES INSECTS.

Many common injurious insects may be distributed upon nursery stock; and several methods have been quite generally employed to lessen the frequency of such distribution. Especially since the San Jose scale has become a serious menace to fruit trees in the East, many states have demanded either inspection or fumigation of all stock grown or distributed; and by these methods fairly satisfactory freedom from dangerous pests on planting stock has been secured.

FUMIGATION MOST EFFECTIVE.

Of these methods, thorough fumigation is undoubtedly the most effective in disposing of insects; and in careful hands it is perfectly safe.

But fumigation requires some well-made apparatus and involves the use of poisonous and corrosive chemicals; so that it cannot be entrusted to careless or untrained hands without danger of ineffective work or risk of life. For this reason some advocate dipping the stock in an insecticide as a substitute for fumigation, especially for use by orchardists who are not content with certificates of inspection or guarantee of fumigation; but desire personally to treat all stock they plant.

DIPS RECOMMENDED.

The success of the lime-sulphur wash as a spray has led to advocacy of its use as a dip for nursery stock, and to the

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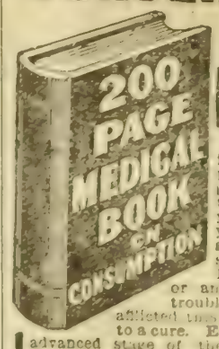

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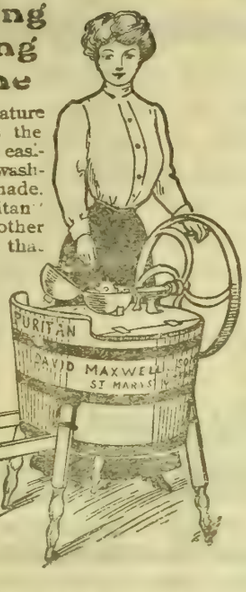

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adoption of such dipping as the official method of treatment in Oregon. Manufacturers of certain proprietary insecticides, especially the miscible oils have also urged their use for this purpose.

TESTING DIPS.

Little information of definite character was available relative to the effect of these materials upon dug nursery stock; but the few careful experiments made indicated that their use sometimes injured the young trees. Neither was it known what strength of any of the mixtures was most effective upon the insects. Accordingly, extensive tests were made at the Station in which both clean and scale-infested trees were dipped for differents periods of time in the boiled lime-sulphur wash heated to different temperatures from 60 to 210 degrees F, or in kerosene emulsion or miscible oil mixtures of varied strength. In many cases the lots of trees were halved, part being immersed completely in the mixture under test, the others dipped only to the collar, the roots not being wet.

More than 2500 trees were used, including apples, pears, peaches and plums. After treatment, the trees, and their fumigated and check trees from the same lots, were set out in the field and their subsequent behavior watched.

RESULTS WITH LIME-SULPHUR WASH.

The trees immersed in the lime-sulphur wash at from 60 to 120 degrees F. and for periods of time varying from instantaneous dipping to submersion for ten minutes were not entirely freed from scales. Some trees were cleaned perfectly; but on others the infection later in the season was from 2 p. c. to 25 p. c. of what it was before treatment. When the wash was not hotter than 120 degrees F. and the trees were exposed three minutes or less, little or no injury to the stock took place unless the roots also were dipped. Whenever the roots were wet with the lime-sulphur wash, most of the trees showed plain signs of injury. When the trees were immersed, even for an instant, in the wash heated to 212 degrees F., the buds and bark suffered severely. At this temperature the scales were all killed.

RESULTS WITH KEROSENE AND MISCIBLE OIL.

In laboratory tests, 20 per cent. kerosene emulsion caused injury to the trees if the roots were dipped; but in field tests with emulsion of the same strength no resulta t injury was observed. Weaker emulsion and miscible oil diluted with 10 or 15 parts of water did not harm the trees and were more efficient in destroying the scale than the lime-sulphur wash at any temperature safe to use.

FUMIGATION BEST.

None of the trees fumigated with hydrocyanic acid gas were injured; and all were perfectly freed from scales.

CONCLUSION.

While good results were secured from some of the mixtures used in these tests, the practice of dipping cannot be recommended as a general substitute for fumigation with hydrocyanic gas. None of the mixtures was as effective as the gas, except under conditions destructive to the trees; while the gas treatment, properly managed, is harmless. Nurserymen, who have to test large numbers of trees, will find dipping little, if any, more convenient than fumigation; but where only small numbers of trees are to be handled, dipping may be easier. For this purpose kerosene emulsion and miscible oil mixtures are apparently most efficient, and are harmless if care is used to dip the tops of the trees only, down as far as the collar. Also, for those who prefer to use the lime-sulphur mixture, the temperature of the wash should be moderate and submersion short; and the greatest care should be taken not to expose the roots to the mixture. The results secured from such use of the wash, however, are not as good as would come from spraying the tree, after planting, with the same mixture.—F. H. HALL, Geneva, N. Y.

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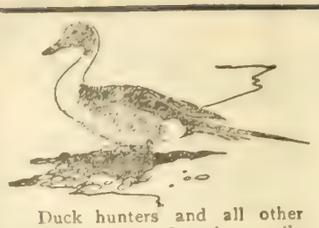

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are swinging Stanchions. See the comfort and freedom they give to cattle. Are strongly made to stand the roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle because the latch is easily operated and absolutely secure.

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DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Dairy Form.

Dairy form and function are so closely related to each other that a discussion of the one must also consider the other. It may not be entirely clear to all the readers just what is ment by the term dairy form. The "typical dairy form," the dairy "wedges" or the "wedges of the dairy cow" are often referred to and the terms handled so indiscriminately that it sometimes seems that those who use the terms are not otherwise fully aware of just what they mean.

The work of the dairy cow has made her what she it. She is, in a certain sense, an artificial product, and during the many years through which she has been developing she has taken on a form which is distinguishingly characteristic.

Her large barrel, great chest development, and ponderous udder were not sought for in and of themselves. The dairy cow has been developed to produce milk. Her ability to do that is the reason for her existence, and high milk producing powers have given her the definite dairy shape—the large barrel to enable her to consume large quantities of feed; the well developed chest to give her great heart and lung capacity, insuring a vigorous circulation of rich, pure blood; and a large udder to enable her to draw on the blood stream and appropriate the vital fluid in large quantities for secreting milk in abundance. It would be hard to conceive a dairy cow being any other shape than what she is and still do the work for which she has been developed.

Speaking of the "dairy wedge" is just another way of saying that the organs having to do with milk production must be well developed if the cow is to have any claim for dairy superiority. Her body is the base of the wedge tapering from rear to fore, and from back line towards the ground.

Improving Conditions.

A 1908 bulletin from Storrs, Conn, experiment station, prepared by J. M. Trueman, treats the subject, "Improving Dairy Conditions," and has the following to say about the head of the herd:

The dairy herd can be improved in the least time and with the least cost by the use of a high class, pure bred, but should be a good pure bred. The time has gone by for paying high prices for animals simply because they are registered. The dairyman of today should have a bull whose immediate ancestors are, or have been, heavy producers. His dam, and his granddam on his sire's side, must be able to produce milk, or butterfat, or both, in large quantities. If these two ancestors are first class in every way the question of pedigree is largely settled. It is folly to go back five or six generations to find a good animal, or even a famous animal in a pedigree, and to pass over four or five generations of non-producers. It is the immediate ancestry that counts. The dairyman who wants a good bull is safe, as far as pedigree is concerned, in selecting one whose dam and two granddams have been fine producers, and whose sire is a good individual of dairy type.

The bull chosen should be a good individual as well as have a good pedigree. It is not wise to use a poor animal simply because his ancestors have been good, for he will be one of the ancestors of the succeeding generations.

The bull should be vigorous as shown by a bright eye, a wideawake, active disposition, a full crest, broad chest, fine silky hair, and soft hide. He should have a large deep body, with well-sprung ribs, indicating feeding capacity. He should not be coarse and beefy. The hind quarters should not be peaked, but should be comparatively light. The thighs should not be overloaded with fat, and he should be well cut up in the twist. He should have a fine straight-away walking gait, not cros-legged When you find one just right, buy him, and do not be too particular about the price.

This bull should be used on the best cow that can be selected from those available. They need not be pure breds. In fact, many men will get better results to stick to grades. It does not require as much skill to breed good grades as it does to breed good pure-breds. The pure bred bull will be prepotent over the grade cows, and the calves will be more than half blood in actual characteristics. The strong blood of the pure bred bull impresses the offspring much more than does the weaker blood of the grade, so that the bull becomes more than half the grade herd. On the other hand, in breeding pure breds together great judgment is required to get the two currents of strong blood to mix well, otherwise the results may be, and often are, disastrous. The two do not "nick" well and the offspring is poorer than either parent.

The blood of the good bull may be more strongly impressed upon the grades by closer inbreeding than is advisable when rising pure breds. A strong bull bred to grade cows gets strong heifers, and he may be bred again to his own with a strong likelihood of getting good results. This method gives 75 per cent. of the blood of the sire in the heifers of the second generation. It is not wise to inbreed too much when raising bure breds, but it may be practiced with excellent results in the case of grades.

Breed to Use.—The particular breed that is used is not important. Each farmer should elect the one he likes best. In building up a herd for the dairy it is best to use one of the distinctive dairy breeds. There is variety and quality enough in the four leading dairy breeds to satisfy the ambition and exercise the skill of any and all dairymen.

Breed does not guarantee excellence in individuals. Unfortunately there are poor specimens in every breed, and the only safe method is to depend on pedgree and performance, and not to think that an animal must be good simply because it belongs to a good breed

Young bulls should not be placed at the head of a herd until they have been tested. That means that bulls are not ready for general or extensive use until they are three or four years old. Instead of keeping them until fully matured the common custom is to use them freely as yearlings and two-year-olds, and then get rid of them because they may get cross. We can hardly blame the bull for getting cross when he is kept tied up the year round without exercise. If properly cared for he should be easy to handle, and sure and quick in service until he is ten or twelve years old. Sarcastic Lad is eleven years old and is still at the head of the Holstein herd owned by the Illinois agricultural college. He weighs over 2,400 pounds, is active, and is getting as fine a lot of calves as anyone could wish to own. Old Pedro, No. 3187, was used by T. S Cooper untill he was nineteen years old. The value of sires that have been tested and have proved to be fine stock getters can hardly be estimated. Almost invariably the one case of failure and bad temper in old bulls is lack of exercise. An hour's walk on a treadmill every day will do wonders towards making a bull vigorous, quick and good natured.

Brighten Up

The Fall is an excellent time to paint your buildings. The weather as a rule is more favorable for painting in the Fall than any other time —less damp and rain to soak the lumber before painting, and no flies and insects to stick to the wet paint and mar or spoil the surface. If your buildings need paint protection from the winter storms, do not delay. Paint them this Fall. Ask your dealer for

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Petrol Butter the Latest Invention.

There seems to be no end of products made from crude petroleum, in addition to the supposedly chief purpose of lighting and greasing. Just now another discovery has been made and the oil well comes in direct competition with the cow. The next step will probably be the production of fresh milk or whole cream cheese. The first roll of petroleum butter, the Standard Oil's latest product, has just been turned out at the Wood River refineey near Alton, Ill. Preparations are being made to manufacture the product, and the machinery has been shipped. The new product will be known as "petrol butter." It is said to be of the same consistency as lacteal butter, but brown in color. It lasts a great deal longer than real butter, it is said, and does not become rancid.

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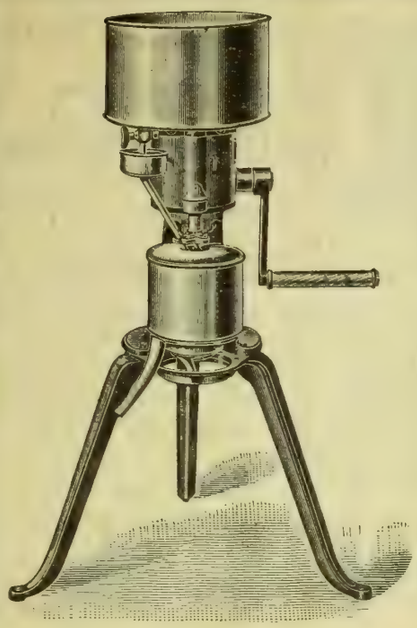

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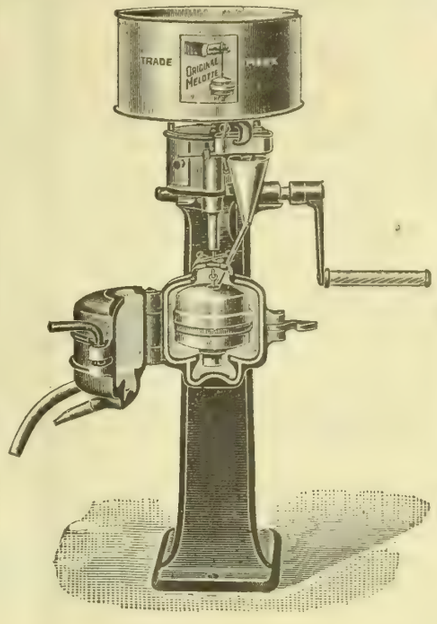

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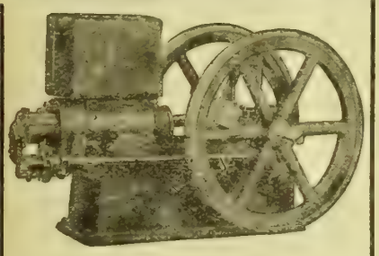

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If you anticipate buying an engine, see our exhibit at the Halifax Exhibition, or write us card for prices, catalogue and full information. It will save you money.

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Don't Hesitate.

Every dairy farmer must face the proposition of increasing his milk and butter yield. If he does not, his herd is running behind. There are certain things feed can do, and certain things management can do. Both of these need study and the making up of good judgement. But breeding is the foundation. We must have the right foundation. We know of farmers who have been putting off buying a regitered bull for years and they are no nearer to it to day than ever. They are not quite convinced that such a bull's daughters would yield any better than their mothers. The reason they look at the question that way is because they have had no experience and they do not feel like taking other men's word for it. Yet we have seen some remarkable instances of improvement worked out in one generation. We have a registered cow in our herd that has just passed through the Advanced Registry with a credit of 408 lbs. of butter fat in one year. Her mother was the poorest Guernsey cow we ever owned and could not make over 225 lbs. of butter in a year. Yet here is her heifer that produces at the rate of nearly 470 lbs. of butter per year. What did it? We believe the chief cause to be the character of her sire. The Cornell University took a herd that averaged only about 3000 lbs. or milk per cow, yet the heifers from these cows averaged 7500 lbs. of milk in one year and they say that the leading cause of this great change was the use of a pure bred bull and a rigid selection of the best heifers. Farmers can not afford to longer delay the breeding up of their herds.—Hoards.

FARMER'S BOILERS AND FEED COOKERS,
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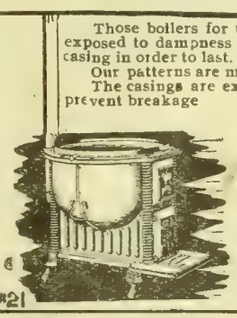

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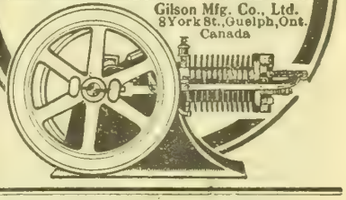

This issue is Volume XV, No. 1—Get your neighbor to subscribe to-day and start with the first number of the new volume.

LIVE STOCK.

Choosing a Flock Header.

One of the things that makes the work of the farm and the care of stock interesting in our time is that the putting down of the experience of the best operators in books and the dissemination of knowledge in our agricultural journals places at the disposal of everyone an organized body of facts, knowledge and experiences that constitute the science of the work. Science is no longer a knowledge of masses and gases and things ponderable only. Every art has its science, which is the body of organized knowledge derived from experience and observation in the pursuit of that art. There is a science underlying the matter of choosing live stock of any kind. Impression or taste is not a sufficient guide and it is possible to know the why in all cases.

In the selection of a ram there are three bases on which the buyer should work or three considera ions that should go together to determine his choice. These are constitutional, feeding and blocking qualities. The shepherd is a breeder, a feeder and a seller of meat or meat animals. There are certain indications that show forth the desired qualities in an animal. For good constitution a ram should have a capacious chest chamber. It should be broad in the floor and extended well forward but should not drop to a point. It should be full behind the fore leg and full at the crops. The top should not be narrow or peaked. The sensibilities should be keen. The ear should be alert, the eye lively, and the nostrils open. The bone should be clean and not meaty. There should likewise be suitable masculine character shown in the strength of neck, aggressiveness of head and boldness of expression. The male parts should be well developed.

For good feeding qualities a sheep should have a broad level back throughout. The shoulder top should not be narrow and the ribs should be well sprung to make a roomy food chamber. The skin should be thin, the oily secretion generous according to the breed, the wool springy to the touch, the feeling of flesh mellow and the disposition placid. The flesh should be evenly put on and not lumpy. The head should be broad on top and short The neck short and set nicely into the shoulder.

The most valuable parts of the carcass are the leg and the loin. The meat should reach well down to the hock. The legs should set well apart and be well filled between. The upper part of the quarter should be long and broad. The length and breadth should be well carried out. The loin should be broad and level and should be well covered with flesh.

These qualities apply to all mutton sheep alike. In addition to attending to these the buyer should pay attention to breed type.

In most breeds of sheep the ram is about one-third larger aud heavier than the ewe, but inordinate size is not generally desirable. Most breeders of experience are ready to accept reasonable size or even to select a moderately or slightly smaller male, if by so doing right symmetry and proper balance of parts are secured.—N. W. Farmer.

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Stoppage of the Bowels in Cattle.

This is one of the most common ailments that cattle are subject to; at the same time more cattle die from this cause than any other, for the simple reason that stoppage is due to paralysis of the bowels.

Stoppage of the bowels is to be regarded as a sign of another disease rather than a disease of itself. It occurs in almost all fevers, indigestion and over eating.

In order to overcome stoppage of the bowels a treatment must be applied to overcome the ailment which causes it, such as paralysis of the bowels. Seventy-five per cent. of the cases of stoppage of the bowels are due to partial paralysis of the bowels. In this case the bowels require a laxative and tonic and not a physic, for if the bowels are paralyzed a physic will have a tendency to cause irritation, indigestion, inflammation, and death follows. For this reason it is dangerous to give a cow salts or oil.

A cow thus afflicted should be given a laxative and tonic, plenty of drinking water, with the chill taken from it, bran mashes made from flax seed tea, also inject several quarts of warm water once or twice daily through the rectum by the use of a hose and funnel, and give the animal a reasonable amount of exercise.—Dr. David Roberts, Wisconsin State Veterinarian.

The Profitable Feeder.

It pays to feed some kinds of animals, and some kinds it does not pay to feed. The condition of the animal, in selecting feeders, is perhaps not of so much consideration as some other things. We would much rather feed some lean animals than others. A broad backed animal with good heart girth, the right kind of a head, and of good breeding, even though it be thin in flesh, will outfeed a cat-hammed, narrow chested, long-legged scrub. The one will respond to generous treatment while the other will eat its owner poor. The more scrub cattle a man feeds through the winter, the poorer he will be in the

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spring. Our climate is not so severe as to make stock feeding unprofitable, but it is too severe to enable a man to get market prices for his grain if fed to scrub animals.

A good and safe guide to follow in picking out a bunch of feeders is to select those having the broadest backs. Along with broad backs go low-settness, good heart and lung capacity, and consequently a good barrel which means good digestive capacity and good spring of ribs for covering over with flesh This corelation of parts in animal form is not merely a nice theory but it is a practicality of the commonest sort. Some may have the idea that the character of the skin and hair must also be considered in selecting feeding cattle. Not at all. Get the good wide backs and the rest will take care of themselves. It is not essential to feel the coat of a feeder; in many cases the buyer could not if he wanted to for such cattle do not stand very readily for such close examination. This matter of coat is of importance in considering the finished or show animal as it, with other things, is an indication of the general tone of the body. Cattle running out as feeders during the summer do not always have the smoothest coats, so this point is not of prime importance, if the other characteristics of a good animal are present.

Now why, someone may ask, does an animal of the above conformation lay on flesh quicker than the fish-backed scrub? A well bred animal has behind it a line of ancestors that have possessed the property of early maturity on a reasonable amount of feed. Moreover a wide chest floor and a good heart girth is indicative of good air and blood apparatus. The lungs will have plenty of room to expand. This insures a good oxygen bath for the blood which stimulates the heart to pump the life stream more vigorously to all parts of the body. Pure blood means that the food eaten can be used to the best advantage and thus we find that growth takes place and that right rapidly. In the narrow-chested, cat-hammed beast, the opposite conditions prevail and the feed goes largely to keep up the activities of the body instead of making new tissue. The character of the profit and loss account will depend largely on the selection of feeders made.

Some Wounds of Live Stock.

Accidents are constantly occurring among live stock and the impossibility of getting veterinary assistance forces a farmer to be his own surgeon. To be able to intelligently treat such animals, we publish the few following hints from our veterinary surgeon.

FOUR KINDS OF WOUNDS.

Wounds are of four kinds; clean-cut, torn, bruised and punctured. A clean-cut wound, lengthwise of the muscle is the easiest to manage. First, see how deep it is and that there is no foreign substance in it, then stop the bleeding by applying hot or cold water. If a large artery has been cut, tie it. Put a teaspoonful of carbolic acid into a quart of water and let a little run over the cut surface. If the wound is not deep, the edges of it can be drawn together, by either silk thread or catgut steeped in the above solution. If, however, the wound is across the muscle, or an inch or more in depth, do not stitch, because the cut end will move below the stitches.

Torn wounds should have the bleeding stopped as above mentioned and then cleaned by letting water run over them. Do not try to sew them up. If the wound assumes an unhealthy appearance, use acetate of lead, 1-2 oz.; sulphate of zinc, 1-2 oz.; carbolic acid. one drachm, and wster one quart. Clean wound with water and apply this lotion twice a day.

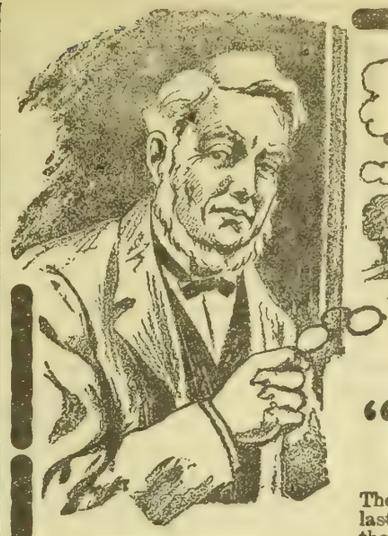
Punctured wounds are the worst of all because they are liable to have foreign substances, such as hair and pieces of wood within, causing inflammation, mortification and death. Probe the part to find the depth and direction of the wound, see if there is any foreign substance in it and remove it. Clean it as well as possible, then dip a piece of soft muslin in a solution of carbolic acid, 3 drachms; water 4 ounces; press this to the bottom of the wound, let it remain a few hours, draw it out and put in a fresh one, and do this 3 times a day. When it begins to matter the danger is passed. Clean it out twice a day and inject a little of the carbolic acid lotion used for cut wounds.

Bruised wounds, if bathed with acetate of lead 1-2 ounce: water 1 quart, several times a day, will not imflame. Sometimes matter will collect and the parts swell up and be soft and puffy. In this case open it and inject a little of the following twice a day: zinc chloride 2 drachms; water, 1 quart. If it leaves a thickening rub with the following every second week: Biniodide of mercury, 1 drachm; lard, 1 1-2 ounces.

For old, unhealthy sores, such as are made by constant rubbing and will not heal, remove the cause and apply a little terchloride of antimony with a feather. In three days a scab will come off and if it looks soft and spongy, apply a little more of the antimony every 3 days until the part becomes healthy. Then use zinc oxide, 1 ounce: lard 2 ounces; rubbing on a little once daily. When the bruises are below the knee, in what is called the low order of tissue, more care will be required. Usually a low form of inflammation sets in, a yellowish discharge begins, and the surrounding parts swell and become hard, the centre of the wound fills up, causing a bad blemish.

The first thing to do in case of a barbed-wire cut on these parts is to put the animal where it can be kept quiet. Bathe the leg every half-hour for the first twenty-four hours with a lotion made of acetate of lead, 1-2 ounce; sulphste of zinc, 1-2 ounce; tincture of arnica, 2 ounces; water, I quart. After the first twenty-four hours, bathe it 3 times a day. If it fills up higher than the skin apply a little bichloride of mercury with a smooth piece of stick, but do not use more at a time than will lie on a dime, as there is danger of the poison being absorbed.

If the animal is fevered or its legs swell from standing give the adult horse half an ounce of nitrate of potassium three times a day in drinking water or a bran mash for a few days, and give half this quantity to a yearling. If in an unthrifty condition give the following: sulphate of iron, 4 ozs.; nux vomica, 2 ounces; mix and divide into twenty-four doses, one to be given twice a day in a mash, and half the quantity for a yearling.



Now is the Time to Repair the Roof

Harvest is over—winter and storms will soon be here—you have a few weeks of spare time while the weather is fine and comparitively warm. This is your opportunity to repair the roofs of your barns, houses and buildings.

Did you ever think how expensive this repairing necessary every year with wooden roofs is, not alone in material but for labor? It will pay you to cover your buildings with a durable fire proof roof of

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A barn roofed with *"EASTLAKE" METALLIC SHINGLES* and sided with our *Galvanized Corragated Iron Siding,* is absolutely protected from fire from outside sources.

Let us quote you on rat and mice-proof sheet metal lining for your granary, also send measurements of your barn and let us give you complete estimates of cost of roofing or siding, or both.

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THE HORSE.

Some Horse Talk.

In a bulletin published some little time ago by the Ohio Agricultural College, Prof. Marshall, of that institution, has compiled some very good points about horses. He claims that in the U. S. about three horses out of every four are being used on farms; and in Canada the proportion would be greater.

DIFFERENT KINDS OF HORSES.

Different kinds of work require different kinds of horses. A horse is of no particular value except for what he can do. To fulfill his mission he must travel. If he can draw a buggy containing one or two persons at the rate of ten miles an honr he is valuable as a roadster. Another horse that can draw his share of a load weighing upwards of a ton, even though he moves slowly, performs an equal amount of actual work and is just as useful to his owner as is the roadster. Since all horses are valuable because they travel, although at various rates and under varying conditions, it will be interesting to make a study of those parts of the horse's body directly connected with his locomotion.

It is not difficult to understand that with the horse, as with ourselves, all motion is the result of the action of the muscles. About 40 per cent. of the weight of an ordinary horse is muscle. All muscles concerned with locomotion are attached to bones, and when they contract they cause the bones to which they are fastened to move. The lower part of a horse's legs are nearly all bones, but the muscles in the body and upper part of the limbs are attached to various parts of the bony construction by tendons and can thus produce a motion of the parts located some distance away. The muscles we are discussing, when contracted, are about three-quarters as long as when at rest. The amount of motion produced by the action of the muscles of, say, one of the horse's hind legs, will depend upon the length of the muscles and the relation of the bones to which they are attached. The commonest idea among students of this subject is expressed in these words: "Long muscles for speed, short muscles for power." A long muscle enables a horse to get over the ground rapidly. A short muscle, however, is not powerful because it is short, but because in horses constructed on that plan the muscles are thicker, contain more fibers, all of which pulling together when contracted exert a much greater pulling force than a long more slender muscle. It is because of this that in buying horses to draw heavy loads we look for large and heavy muscles, while in roadsters we attach more importance to the length of the muscles.

THE HORSES MUSCLES.

The most of a horse's muscle is in the hind quarters. This may be a surprise to you, but the next time you have an opportunity to see a horse pulling a heavy load study him carefully. You will be impressed with the idea that most of the work is being done with the hind legs. When the hind foot is moved forward the toe rests on the ground and the leg is bent at the hock joint; if the toe does not slip, and the horse is strong enough for his load, the muscles above, pulling on the tendon fastened to the back and upper joint of the hock, will close the joint, or, in other words, straighten the leg and cause the body to move forward. It is by the performance of this act at every step that the horse moves, although, of course, the strain on all the parts is much greater when pulling very hard. This will also show the necessity of having large, broad, strait joints and legs, that give the horse the most secure footing. You have probably also noticed when driving that many horses put their hind foot on in the ground in front of the mark left by the fore foot, and the faster they go the greater will be the distance between the marks made by the fore and the hind feet. This shows that the length of the step is determined by the hind quarters; it also explains the need of large, strong hocks and legs that are not so crooked as to seem weak or so straight as to lessen the leverage afforded by this very wonderful arrangement of the parts.

THINGS REQUIRED OF HORSES.

Then there are some other things that are desired in all kinds of horses. One of these is a short back—that is, short from the hips to the top of the shoulders (the withers). From what we have learned of the hind parts we see that the horse is really pushing his body along. If the back is short and strong, instead of long and weak, the whole body will move more easily and rapidly in obedience to to the force produced in the hind parts.

Although the hind parts have most to do with the horse's travelling, we must not forget that the front parts are also very important, No matter how much muscle a horse has or how strong his hocks are, if there is anything seriously wrong with his front legs he cannot travel, and so derives no benefit from his good parts. Some horses may be seen whose knees are not straight, others when looked at from in front show that their feet are not in line with their legs. Such animals are more likely to slip or strike one leg with the opposite foot, thus making themselves lame and unable to do any work.

THE HORSES FEET.

There are a great many interesting things about a horse which cannot be told here, but which you may learn at home or from some neighbor who keeps good horses. We will, however, say something about horses' feet. Inside a horse's hoofs there are some very sensitive parts resembling the attachment of the finger nail and the finger. When anything gets wrong with the foot, these parts cause a great deal of pain, and even though the horse is otherwise perfect the pain in his feet makes him too lame to travel. Horses with large, wide feet that are wide across where they touch the ground when you look at them from behind (or in the heels) are not likely to have this trouble.

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Weak Men, Have Courage!

If you get up in the morning with a dull brain, tired nerves, an ache in your back, a dread of the toil and hardships of everyday life, these are signs that your vitality is at a low ebb—that some of the organs or functions of your body are in a weakened, morbid condition.

If you are a young man, and free rein for evil habits and passions has exhausted your vital energy, or if on the shady side of forty, you have not the strength and stamina that should be possessed by a man of your years, you can regain your health, strength and energy with Electricity.

"None are so blind as those who will not see," but if you are open to conviction and want to improve your condition, I can convince you that my Belt does all I claim for it, and even more.

You don't need to be taught that restless nights, sleeplessness, despondency, inability to concentrate your thoughts, loss of appetite, weak back, headache, pains here and there in other parts of your body, lack of energy and push, are all signs of nervous breakdown, physical debility; you know that, but what you want is a remedy that will restore the vitality that you have lost.

If you have doctored and drugged and got no benefit, that's no sign you ought to give up. Drugs can't restore your vitality. Electricity is for men like you. It's the greatest nerve-builder in the world.

See what people say who have used my Belt. Every mail I get brings scores of such letters.

Dear Sir,—I write to let you know I am well pleased with your treatment. I feel like a new man. I have gained over 20 pounds and am still gaining. I would not be without your Belt for what it cost, and if this one gets played out, I will send for another, for it is worth a good deal to have one's health, and Dr. McLaughlin's Belt will give it to any one when it has helped me.

DAVID CRAWFORD, Oso Station, Ont.

Dear Sir,—I have been suffering from Rheumatism for the last two years, and your Belt has completely cured me in two weeks. I would not part with it for twice what I paid for it. I highly recommend your belt when I have an opportunity, and I am thankful for what the Belt has done for me. JOSEPH LARGISS, Huntingdom, Que.

My Belt, with special Electric attachment, will restore your vigor. It will check all loss of vitality, and affect every organ of the body. It cures Nervous Debility, Varicocele, Rheumatism, Lame Back, Lumbago, Sciatica, any case of Kidney Disease that has not gone as far as Bright's Disease, Stomach Trouble, Constipation. If you haven't confidence in electricity, let me treat you at my risk. I will give you the Belt on trial, without one cent of risk to yourself. Give me reasonable security and I will take your case, and you can

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Call at my office and let me explain my Belt. If you can't do this, cut out this coupon, send me your name and address to-day, and I'll mail you, closely sealed, my elegantly illustrated 80-page book, which is FREE. MY FREE BOOK for women is now ready. All men and women who are interested in recovering their health should read these books, for they point the way to Health and Happiness. Office Hours—9 a. m. to 6 p. m. Wednesday and Saturday until 8.30 p. m.

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Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. **If not satisfied we will refund the amount.**

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leather blinds.
Breast Collar—Single strap.
Traces—1¼ wide; heavy single strap lined at both ends; sewed to breast collar.
Saddle—2¾ in., full padded; patent leather; swell skirts.
Breeching—Well made, with flaxseed stuffed cropper.
Reins—Cut from good leather.

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POULTRY.

Doctoring Fowls.

The few chicks that die in a flock that is properly cared for, usually should die; the flock is better to be rid of them. We are too sentimental in regard to ailing chicks. "It is making such a hard fight for its life, I can't bear to kill it," is a common remark about a dwarfed or stunted chick. We can't afford to let these weaklings live; they are the first to succumb to disease, and may become a source of danger to others. A tubercular chick is a menace to the entire flock; kill it and burn it before it contaminates the rest. A roupy chick, or a weakling with chicken-pox or a dirty nose is as bad. Get rid of the weaklings early. A thrifty chicken is not worth very much; a weakling, with its power of damaging healthy members of the flock, is a positive menace.

Where it seems best to doctor sick fowls, they must be separated from the others; disinfect the houses and runs the sick birds have been in, and then treat according to symptoms. A few simple remedies should always be on hand, a good disinfectant, a tonic, carbolished vaesline, and peroxide of hydrogen. Cure the disease before it gets a good start; don't neglect taking early precautions to prevent the spread of the disease. Keep up a constant warfare against lice, give conditions conductive to health, check the first symptoms of disease, isolate the sick, kill and burn the advanced cases, and the losses from preventable causes will be light.

Lice and Mites.

There are several varieties of lice which attack poultry. They subsist mainly on the feathers and perhaps on the epidermic scales. They are found largely on the head and neck, under the wings and about the vent, and when present in large numbers they cause the fowls much discomfort. Persian insect powder (pryethrum), powdered sulphur, and some of the various preparations on the market such as the louse powders, are good in combating these pests. The pens can be dusted with one of these powders after they have gone to roost. Have the powder in a box with a perforated cover, grasp the fowl by the legs, and shake the powder well among the feathers. Dust at least three times at intervals of about a weak in order to catch the lice which hatch out after the first dusting.

The mites subsist on the blood of the fowls and are not usually found on the bodies of the birds except when at roost or on the nest. During the day they inhabit cracks and crevices of the walls, roosts and nests. Sitting hens are often so annoyed that they are compelled to leave the nests in order to relieve themselves of these parasites. The free use of kerosene about the nests and perches is useful in fighting the mites. The walls of the house may be sprayed with kerosene, the operation being repeated every three or four days for two weeks. Insect powders are of little avail.

The following method has proved excellent in ridding houses of mites and lice when the weather conditions are such as to permit the birds being kept outside the house for five or six hours. Close all the doors and windows and see that there are no cracks or any other openings to admit air. Get an iron vessel and set it on gravel or sand near the centre of the house; place a handful of shavings on these, sprinkle sulphur at the rate of one pound to every 90 or 100 square feet of floor space. Instead of using the shavings and kerosene the sulphur can be saturated with wood alcohol When everything else is in readiness light the material and hastily leave the house. In case any anxiety is felt about fire, a glance through a window will show whether everything is all right. There is very little danger of fire when precautions have been taken to have plenty of soil beneath the vessel. Allow the house to remain closed for three or four hours, at the end of which time one can safely conclude that there are no living beings inside. Now throw all the doors and windows wide open so as to drive out the sulphur fumes thoroughly, and then the fowls may be allowed to enter. Let them in one by one, and as each enters catch it and dust it well with insect powder, which will destroy the lice on the birds. Tobacco dust is also good to use instead of insect powder The birds and house have now been freed from vermin for the present, but the eggs of the insects have not been destroyed, and in a week another swarm will be hatched out. Therefore, it will be necessary to repeat the operation once or twice before the pests are exterminated. After this, care should be used that no strange fowl be addmitted to the house or yard without having been thoroughly rid of lice, for one lousy hen will contaminate all the rest. —U. S. Dept. of Agriculture.

Get Rid of the Culls.

Get rid of your "culls" just as soon as possible after they are ready for market. This is an important matter that is sometimes overlooked by breeders. Especially is this important where space is limited. "Culls" are a hindrance to the growth and development of the balance of the flock, for several reasons. Neither growing chicks or the old fowls do well in overcrowded quarters, and are more liable to contract disease and become lousy. Besides the breeder is enabled to give better care to the balance of the flock after the culls are out of the way. Cull closly, disposing of all specimens that show any permanent defect, such as wry tails, crooked breast bone, roach back, twisted back, feathers on legs or toes in American, Spanish and other clean legged breeds, and lack of feathers on legs and toes in the Asiatic breeds, or any serious defect in comb, wattles or earlobes. In fact get rid of all birds having any defect that you know cannot be outgrown. If raising market poultry, of course these defects cut no figure, but even in this branch of the business careful culling is desirable and profitable, as the flocks should be weeded out and the non-productive birds discarded.

Scaly Leg.

Scaly leg is a disease about which some poultry owners know very little. It is caused by a very small insect burrowing under the scales of the legs. The affected parts should be thoroughly cleansed daily with warm soap-suds, using a hard bristle brush. Dry thoroughly and anoint with a mixture of sublimated sulphur one part and vaseline two parts. Rub well in between the scales, and after a few treatments the legs will be clean and smooth. Scaly leg is contagious in the same sense that lousiness is contagious, but if taken in time is easy to cure.

The pleasant purgative effect experienced by all who use Chamberlain's Stomach and Liver Tablets, and the healthy condition of the body and mind which they create, makes one feel joyful. Sold by all dealers.

Piano News.

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50% Increase

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Remember the Government authorizes Trustees, Executors, etc, to invest in these Debentures.

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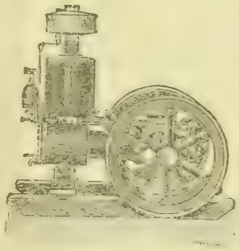

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THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage. Address all communications to EVANGELINE, Port Williams Station, N. S.

Who is the Greatest.

We have read of kings and monarchs,
All the conquests they have won,
How some ruled their nation wisely
And noble deeds had done,
And how heroes of our navy
Won for us many a fight,
But we've overlooked the mother
Who has trained her children right.

We have read how some wise statesmen
Served their native land so well,
How the generals gained the victories
Ere on battlefields they fell,
And how patriots of our country
Did their duty with delight,
But we've overlooked the mother,
Who had trained her children right.

We rise statues for the noble,
Who have done some mighty work,
Who ever acted wisely
And duty never shirked,
And we praise the saintly heroes
Who proclaim the Truth and Light,
But we've overlooked the mother
Who has trained her children right.
—A. E. Vassar.

Miss Slimmens's Boarding House.

(Continued from last issue.)

May I take the paper to my room, Dora? Humph! that impudent jade! and to think that I actually kissed her! my blood boils when I think of it; and it boils harder still when I read that scrap of paper I picked up in her room, after she went away. Let me look at it again.

"Such fun, Belle, such fun alive! I thought I should suffocate! She wanted to kiss me, but I resisted a long time, for I was afraid she took snuff; but at last she conquered me—she was the strongest. However, she dosen't take snuff; the kiss, whatever else it was, was not snuffy!"

Ha! snuffy, indeed! If he ever brings his bride back here, she'll get her dress tore some day; she didn't reflect she was making an enemy for life. Harry Weldon had better settle in some other place, if he wishes his wife to have any peace. I'll have my revenge for that scrap of paper yet.

CHAPTER XVI.

RAT EXTERMINATION.

What's that you remarked, Dr. Burton? Arsenic? O my! I thought that horid stuff was only good for killing rats or committing suicide! It'll make a woman of fifty, you say, as fair and blooming as a girl of twenty, and it's wonderful for fattening people up! If I was in danger of getting to be forty or fifty years old soon, I believe I'd commence taking it, to preserve my complexion. I don't suppose I shall ever need fattening, though I look rather thin in the face; it runs in the Slimmens family to be thin in the face and fleshy otherwise. Them Circassian women must be dreadfully vain females, to take such terrible stuff as arsenic to keep themselves white and soft. Don't you think so, Mr. Bethuen? Don't you think it perfectly unexcusable for the feminine sex to be given such arts? Their minds ought to be set on higher things, Mr. Bethuen, on higher things; I've long felt it. But I suppose them Circassian ladies are heathens and Mahomadens, and don't know any better. Don't you ever feel as if you had a call to go and teach them better! Only to reflect upon their eating arsenic like sugar candy, and we sitting here in our comfortable homes, and never making an effort in their behalf! Oh, Mr. Bethuen, it's disparaging to our benevolence that such is the fact! But it is not so bad in them as to think that English women and our own American girls are a-going and doing the same, as much as they durst. Eating arsenic to make themselves look fair, you say, Dr. Burton? I'm glad you told me; I'm glad I'm warned against the deprivity which exists in our midst. After this, when I see anybody very plump and white, I shall be sure they are arsenic-eaters. There's them twins, Philista and Philistina Podd, as fat and babyish—Oh, you needn't color up so, Mr. Barker; I don't mean nothing, only I wish to warn Mr. Bethuen of what might be. It would be dreadful for a minister of the gospel to find out that his wife was a suicide, as it were, a self-poisoner, and all for the vain glory of the flesh. Dursn't never leave it off, after they've once become victims of its pernicious influence? Have to keep on taking more and more? O Doctor! And how much is it safe to begin with? I merely inquire to satisfy a physical curiosity. How many did you say, Mr. Little? Forty grains? You should think the ladies would have scruples against taking such drachms?—he! he! But that's borrowed wit, for I've heard it before.

Have some more of the fried trout, Doctor; they didn't cost me anything, for Mr. Little caught 'em himself, and made 'em a present to the house, so you can thank him for 'em. Have some more, Dora, do. Dear, dear, what a light and trifling generation this is getting to be! Hoops, and bustles, and crinoline enough for a bloon, and now it's arsenic for an emetic. Hey, Mr. Little? Tarter emetic, you should call it, considering where it originated? You jest about the soberest subject. He's a little too much of a jesticulater; don't you think so, Mr. Bethuen?

O Lord of Mercy! I've went, and gone and done it! I know I have! I feel it here! Committed suicide! I've gone and killed myself! Oh, how it burns! my stomach's all a-fire! Oh, I wish I hadn't—I wish I hadn't tried it; but I was so awfully yellow, and it would show through spite of all I could do, and so wrinkly, and now I've gone and poisoned myself. I've taken too much! it's eating me up and burning me up alive! Dora! Dora! where are you? Oh, let me in, and tell me what to do! I'm sick—I'm poisoned with arsenic! I just took a little, not much bigger than a quinine powder; and my stomach's all griping up and burning like fire. Take an antidote? What? Eggs? O dear, I wonder if there's any in the house; I'll go and see. You go and find out where the Doctor is. If he isn't in his room, send Caturah after him—quick. Never mind the eggs; run for the Doctor. Oh-h-h! Susan, where's the eggs? Bring me some. here! hand 'em to me—a dozen. Oh-h-h!

There! I've swallowed a dozen raw. Oh, Doctor, is that you? I'm afraid you're too late. I'm poisoned; I'm dying dead this minute. Did you bring your stomach-pump? Arsenic—it's arsenic. I'll open my mouth. Oh-h-h!

I believe I feel better. Do you think it's all up? Do you think I'm out of danger? Oh, Doctor, I've run a narrow risk this time. It all come of them pesky rats. I got some vermifuge, or extermination, or whatever you call it, and put it on a plate in the pantry to keep the rats away; and somehow I forgot, and mistook it for sugar; and sweetened some lemonade with it I was making, the day was so warm. I never thought till I began to be sick, what was the matter. Oh, Doctor, if it hadn't been for them eggs and that pump, I shudder to think—Yes, I'll lay down; I feel as weak as a cat. If you will just help me up the stairs I'll go to bed. Dora? Yes, I'm afraid I scared her most to death. After I'm comfortable, you'd better go and see if the excitement has hurt her. O my, them pesky rats! There! that'll do. Come in again after supper, and see how I am. And, Doctor, a word more—be sure and let the boarders know it was them pesky insects that did it.

Now't I'm out of danger, you'll never catch me at that again; not if I get to be yellower than brimstun itself, and need bleaching more'n old Aunt Peggy's best bunnit. My sensations were undescribable; I hardley knew which it was best to send for—the Doctor or Mr. Bethuen. I hope Timothy Bethuen won't distrust the truth of the matter. I didn't much more than begin to feel better before I luckily thought of laying it to the rats. Nobody'll guess the truth but Dora, and she's seen me in too many predicaments for me to care for her. She's a good soul, for she never betrays me; but now that she's a husband, it will be different. I'm awful afraid she'll confide it to him, and he's so fond of fun, he'll let it all out; he's an awful person to get jokes on people. I feel as weak and used up as if I'd been sick for a month. I shall have to keep my room two or three days, at least; and there's them currants getting too ripe for jelly; and the house a-going to rack and ruin, with nobody to watch them everlesting girls. But I'm thankful I'm alive, currant jelly or no currant jelly and the next time anybody catches me taking arsenic to bleach myself, they may set me down for a bigger simpleton than I am. I'm afraid there's no such thing as making a young woman out of an old one, as easy as making a new Tuscan out of an old one. I hate to give up—I can't, that's the long and short of it. But ugh, that arsenic!

CHAPTER XVII.

"BLESS US! THIS IS PLEASANT, RIDING ON THE RAIL."

I've come to ask a very great favor of you, Dora, if you feel equal to the task. I've been so poorly ever since that dose of rat poison that I took by mistake, I'm afraid I'm going into a decline. Doctor Burton recommends sea air; he says he known of nothing but a change of air that'll do me any particular good, and I've about made up my mind to go to Newport for a couple of weeks. It's a very expensive place, I know; but I've made considerable of money since I came into this house, and a young lady ought to see something of the world outside of her native village'—specially if she anticipates ever making a good match. We often hear that

"Distance lends enchantment to the view,"

and it may be that I shall be more properly appreciated in a new spear than I am in Pennyvilie—particularly if it's discreetly given out that Miss Slimmens is a beauty, a blue, and an heiress! I've made up my mind to afford the money for the tower; but I don't know what to do about them everlasting girls. Caturah's handy, and Susan's got so she can go ahead as well as I can; and if you'd just trouble to have an eye to the sugar, and the tea-caddy, and a few little things, I don't know but what I might trust 'em. My family's uncommonly small now, and they won't have much to do.

Thank you! Much obliged. But it's just like you Dora; you're always ready to do a good turn for anybody that asks it. I felt rather delicate about putting any care on you, at present, though I don't ask of you to do a thing but to keep the keys. Yes, I do need the change;" I realized it myself. I can hardly drag about the house this warm weather. And now that the matter's settled, what shall I wear? that's the great question. I expect my wardrobe'll cost me more than all my other expenses put together. I must dress genteelly, or I sha'n't stand any chance to make an impression. That white satin I got the time the professor boarded here will do for one ball-dress, and my pink silk for another. I've got a handsome watch and chain, you know, and considerable jewelry, and if you'd lend me that pearl set Mr. Little gave you on your birth-day, I'd take good care of it and conside it a favor. You won't be going out much this warm weather to need it, and it just suits my style, don't you think so? Probably you'd never have had it if it hadn't been for my good-will, making a match between you and George; so you see I consider I've sort of a claim on it. He! he! I think a new white muslin, flounced to the waist, with blue trimmings and your pearl-set, will be sweet for another evening toilet. I'm going to take my new gray more-antique for a travelling dress. I expect it will get ruined; but, considering that I am going for the benefit of my health, and to

Care In Preparing Food.

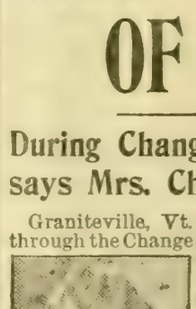
In recent years scientists have proved that the value of food is measured largely by its purity; the result is the most stringent pure food laws that have ever been known.

One food that has stood out prominently as a perfectly clean and pure food and which was as pure before the enactment of these laws as it could possibly be is Quaker Oats; conceded by the experts to be the ideal food for making strength of muscle and brain. The best and cheapest of all foods. The superiority of Quaker Oats over all other oatmeals is due to two things; the greatest care in the selection of the finest oats obtainable and the special machinery by which this oats is cleaned, rolled and packed. The Quaker Oats Company is the only manufacturer of oatmeal that has satisfactorily solved the problem of removing the husks and black specks which are so annoying when other brands are eaten. 1

WORTH MOUNTAINS OF GOLD

During Change of Life, says Mrs. Chas. Barclay

Graniteville, Vt. — "I was passing through the Change of Life and suffered



from nervousness and other annoying symptoms, and I can truly say that Lydia E. Pinkham's Vegetable Compound has proved worth mountains of gold to me, as it restored my health and strength. I never forget to tell my friends what Lydia E. Pinkham's Vegetable Compound has done for me during this trying period. Complete restoration to health means so much to me that for the sake of other suffering women I am willing to make my trouble public so you may publish this letter." — MRS. CHAS. BARCLAY, R.F.D., Graniteville, Vt.

No other medicine for woman's ills has received such wide-spread and unqualified endorsement. No other medicine we know of has such a record of cures of female ills as has Lydia E. Pinkham's Vegetable Compound.

For more than 30 years it has been curing female complaints such as inflammation, ulceration, local weaknesses, fibroid tumors, irregularities, periodic pains, backache, indigestion and nervous prostration, and it is unequalled for carrying women safely through the period of change of life. It costs but little to try Lydia E. Pinkham's Vegetable Compound, and, as Mrs. Barclay says, it is "worth mountains of gold" to suffering women.

see a little of general society, I guess can afford it. There's nothing like making an astonishing impression at first. I hope those darling hats, with lace around the brims, and ribbons flying, will be the fashion again this season at the watering-places; they're so bewitching, and they'll be so becoming to my long curls. Ringlets, flowing from beneath a broad-brimmed straw hat, cannot fail to impart a coquettish appearance. I think I shall wear one during my promenades, whether other ladies do or not. I have hardly decided whether to adopt a playful or pensile demeanor; but considering my delicate health, and that I am unaccompanied by an escort, I shall likely decide in favor of the pensile.

(Continued in next issue.)

How Experiences Differ.

The Country Gentleman says hay caps made of muslin will not last more than two seasons. Hay caps are now in use on the farm of the Senior Editor of this paper, made from A sheeting, not hemmed, that have been used three times a year for the last five years. If care is taken not to allow the caps to remain on the ground more than a few hours after the hay is hauled and they are kept in a dry place away from mice, there is no reason why heavy muslin caps should not last several years. It is also a useless expense to buttonhole the corners for the strings. A stout string tied with a square knot to the corners rarely gets loose. The weight at each corner, to hold in high wind, should be about eight ounces. A weight of that size can be cheaply made of cement with a hole through the centre for tying on the string.

A Fly Repellant.

The following formula for a fly repellant for cows has been tested by the Kansas Agricultural College and is recommended by them:—Resin, 1½ pounds; laundry soap, 2 cakes; fish oil, ½ pint; enough water to make three gallons. Dissolve the resin in a solution of soap and water by heating, add the fish oil and the rest of the water. Apply with a brush. If to be used as a spray, add ½ pint of kerosene. This mixture will cost from seven to eight cents per gallon, and may be used on cows or calves. One-half pint of this mixture is considered enough for one application for a cow; a calf, of course, would require considerably less. It will be more economical to apply this only to the parts of the animal not reached by the tail. At first it will be necessary to give two or three applications per week, until the outer ends of the hair become coated with resin. After that retouch those parts where the resin is rubbed off.

Cowan's

Cake Icings

If you had trouble with prepared Cake Icing, it was not Cowan's.

Even a child can ice a cake perfectly, in three minutes, with Cowan's Icing. Eight delicious flavors. Sold everywhere.

The Cowan Co. Limited, Toronto. 89

"SILVER PLATE THAT WEARS"

The Silversmith Knows

that spoons, forks, knives, etc., of best reputation bear the trade mark

"1847 ROGERS BROS."

The 50 years since they were first introduced have developed nothing better.

In buying Tea Sets, Candelabra, Trays, etc., ask for the goods of

MERIDEN BRITA CO.

It is in time of sudden mishap or accident that Chamberlain's Liniment can be relied upon to take the place of the family doctor, who cannot always be found at the moment. Then it is that Chamberlain's Liniment is never found wanting. In case of sprains, cuts, wounds and bruises Chamberlain's Liniment takes out the soreness and drives away the pain. Sold by all dealers.

Formal and Informal Thanksgiving.

Thanksgiving day will have come and gone ere we go to press again. We must consider it now.

The charter members of Thanksgiving day assembled under far different conditions than we celebrate the day in this age. Were they more devout? Had they more to be thankful for?

True devotion is of the inner man. It is hard to measure. It cannot be measured by the length of prayers any more than great sorrow can be expressed by sack cloth and ashes. A prosperous people never give much formal expression to their joys or sorrows. Hence we have drifted far from the formal Thanksgiving day of the Pilgrims.

We have more to be thankful for? There is no question about that. Do you realize that the Pilgrims never saw a train, a street car, a telegraph, telephone, electric light, gas light or even a kerosene lamp. They never saw a bicycle, automobile, or even a ballooon, say nothing of airships? Wouldn't it make their eyes bung out if a phonograph spoke the Lord's prayer to them? Wouldn't they stare in terror if they saw a moving picture show of an Indian fight? They never milked a cow by machinery, harvested grain with a self-binder, threshed wheat with a separator, skimmed milk with a separator, all these and countless others are new things.

Do we realize these things? Are we thankful for the privilege of living in an age like this?

God has been good to our nation. He has blessed us more than any other people. It is well that we keep alive the true spirit of Thanksgiving. It is well that we can halt one day in the year and "Count our many blessings, name them one by one," as the song goes.

While we give formal expression to the thankfulness we feel as a nation, let us not forget to render daily the informal, the secret thanks due to the Giver of all good gifts. Only thus can we keep Canada in the forefront of the nations.

Uses of Paraffin.

Shoes that have become hardened by water may be rendered quite soft again by the application of a little paraffin. The oil should be applied on a cloth, and rubbed well into the leather. It also tends to preserve the leather, and so lengthens the life of the footgear.

A few drops of paraffin added to the water in which linoleum or oilcloth is washed will not only help to preserve it, but will also give it a better polish.

To clean a copper kettle, rub with paraffin and powdered bathbrick, and afterward polish with dry whiting.

Charlottetown Prize List.

(Continued from page 7.)

CLASS 6.—CLYDESDALES, SHIRES AND OTHER REGISTERED DRAFT HORSES.

Stallion, 4 years old and upwards, 1, P. S. Brown, Lord Delmaney, 2, Head St. Peters Bay Clydesdale Co., Wigtown Hero, 3, Daniel McGregor, Eskham, Waggoner.
Stallion, 3 years old, John Richards.
Stallion, 2 years old, 1, Geo. Dockendorff, Atlas; 2, A. E. Ings; 3, Frank Mutch.
Stallion, 1 year old, 1, Gavin Harding; 2, Wallace Stead.
Filly, 3 years old, 1, Robert Roberts; 2, Wm. Vickerson; 3, John Walker.
Filly, 2 years, 1, John Richards.
Filly, 1 year old, 1, Francis Chown.
Foal of 1909, 1, E. Heartz; 2, John T. Morris; 3, W. W. Owen.
Mare, with foal at foot, 1, E. Heartz, 2, W. H. Godfrey; 3, J. T. Morris.
Mare over 3 years old, 1, 2, and 3, John Richards.
Champion Stallion, any age, Diploma, John Richards.
Champion mare, any age, Diploma, John Richards.

CLASS 7.—DRAFT HORSES NOT ELIGIBLE FOR REGISTRY.

Filly, 3 years old, 1, Duncan Reeves, Norboro, P. E. I.; 2, Chester McEwen, North River; 3, Rev. J. B McIntyrre, St. Dustan's.
Filly, 2 years old, Richard Clark, Summerside; 2, Donald Meuchison, North River; 3, Francis Chown, Winsloe.
Filly, 1 years old, 1, David Matheson, Oyster Bed Bridge; 2, A. H. Boswell, Marshfield; 3, Leslie McEwen, North River.
Foal of 1909, 1, Jas. Livingstone, Clyde River; 2, R. B. McKinley, North River; 3, Leslie McEwen
Mare with foal at foot, 1, James Hughes, Covehead; 2, Alex. Matheson, Emerald; 3, R. B. McKinley.
Draft mare or gelding, not less than 1400 lbs, 1, Wilbert Dockendorff, North River; 2, Geo. Handrahan, Charlottetown; 3, Geo., Dockendorff, North River.

CLASS 7.

Special prize given by the Charlottetown Steam Navigation Co. to the 4 best draft colts, under 3 years old, the get of any one registered draft stallion entry to be made in the name of the owner of the sire, 1, R. B. McKinley, North River

CLASS 9.—GENERAL PURPOSE HORSES.

Mare, 3 years old and upwards, 1, R. E. Longworth, 2, James McPhail, Argyle Shore; 3, A. R. Wise, North Milton.
Mare, 2 years old, 1, Andrew McRae, East Royalty; 2, Michael McManus, New Haven; 3, Chester McEwen N. River.
Brood mare with foal at foot, 1, Rev. J. B. McIntyrre, St. D. College; 2, Jas. Livingstone; 3, Pope Cook, Little York.

CLASS 10.—WALKING HORSES.

Mare or gelding, shown in carriage, 1, J. McLeod; 2, J. Wedlock; 3, Thos Beer.
Mare or gelding, draft, to be shown in cart or truckwagon, 1, E. G. Love; 2, Oliver Saunders; 3, John Walker

BEEF CTTLE.

SHORTHORNS.

Bull 3 years and upwards, 1, John Walker.
Bull 2 years old, 1, Samuel C. Lane.

BEEF GRADES.

Cow 4 years and upwards, 1 and 2, Robt. E. Longworth, 3, Wallace Stead.
Heifer 2 years old, 1, Robt E Longworth.
Heifer, 1 year old, 1 and 3, R. E. Longworth; 2 Francis Chowan.
Heifer senior calf, 1, Wm. McKinley.
Heifer junior calf, 1, Robert E. Longworth.

STEERS.

Best pair of steers, 1, year old, 1, A. H. Boswell.
Best pair of steer calves, 1, Samuel C. Lane.

DAIRY CATTLE.

AYRSHIRES.

Bull three years or older, 1, Easton Bros., Fizzaway's Heir; 2, Simmonds Bros. Netherall Gentleman Jeo; 3, Chas. Weatherbe.
Bull, 2 years old, 1 Easton Bros.; Howie's Crusader; 2, W. Moffatt.
Bull 1 year old, 1, Easton Bros., Flash Light of Spruce Row; 2, Roy Bulpitt; 3, Simmonds Bros., Randolph of Spring Park.
Bull senior calf, 1 and 2, Simmonds Bros.; Sir Wilfred and Hector.
Bull junior calf, 1 and 2, Easton Bros.
Cow 3 years old or over, 1, Easton Bros., Pearl of Springhill; 2 and 3, Simmonds Bros., Rose of Kelso and Burnsine Snowlake.
Cow in milk or calf, 2 years old, 1, Easton Bros., Lady Marshfield; 2 and 3, Simmonds Bros., Queen and Princess
Heifer one year old, 1, Simmonds Bros., Pearl of Spring Park; 2 and 3, Easton Bros, White Lady.
Heifer senior calf, 1, Robert Stewart; 2, Easton Bros
Heifer junior calf, 1, Simmonds Bros., Jean; 2, Easton Bros.
Aged herd headed by Howie's Crusader, 1, Easton Bros.; 2, Simmonds Bros.
Breeder's young herd, 1, Eston Bros.; 2, Simmonds Bros
Champion bull, 1, Easton Bros., Howie's Crusader.
Champion female, 1, Easton Bros., Pearl of Springhill.

JERSEYS.

Bull 3 years old or older, 1, Wm. Clark, Dreadnought of St. Lambert; 2; Frank Glydon.
Bull 1 year old, 1, James Essory.
Bull senior calf, 1, Wallace Stead,
Bull junior calf, 1, Wallace Stead; 2, Spurgeon Warren.
Cow 3 years or older, 1 and 2 Wm. Clark, Cana Meines of Maple Grove, Rosalina of Maple Grove; 3, Wallace Stead
Cow or heifer two years old, 1, Wm. Clark, Vesta Vice; 2, James Essory; 3, Wallace Stead.
Heifer, 1 year old, 1, Wallace Stead; 2, Wm. Clark.
Heifer senior calf, 1, Wm. Clark.
Heifer junior calf, 1, Wallace Stead; 2, Wm. Clark.
Aged herd, 1, Wm. Clark.
Breeder's young herd, 1, Wm. Clark.
Champion bull any age, 1, Wm. Clark, Dreadnought of St. Lambert.
Champion female, any age, 1, Wm. Clark, Cana Meines.

GUERNSEYS.

Bull 2 years old, 1, Roper Bros.
Bull 1 year old, 1, James Roper; 2, Roper Bros.
Bull senior calf, 1, James Roper.
Bull, junior calf, 1, Roper Bros.; 2, Francis Chowan.
Cow 3 years or older, 1 and 2, Roper Bros.; 3, James Roper.
Cow or heifer, 2 years old, 1 and 3, James Roper; 2, Roper Bros.
Heifer, 1 year old, 1 and 3, Roper Bros.; 2, James Roper.
Heifer senior calf, 1, Francis Chowan; 2, James Roper.
Heifer junior calf, 1, Roper Bros., 2, James Roper.
Aged herd, 1, Roper Bros.
Breeder's young herd, 1, Roper Bros.
Champion bull 1, Roper Bros.
Champion female, any age, 1, Roper Bros.

HOLSTEIN FRIESIANS.

Bull 3 years old or older, 1, Gavin Harding, Artis Jake; 2, J. A. Wedlock; 3, Peter M. Robertson.
Bull 2 years old, 1, John Tweddy; 2, Josiah Howatt; 3, John H. Court, Prince Johanna Lad.
Bull 1 year old, 1, Gavin Harding, Prince Posch; 2, C. J. Bruce, College Artis; 3, Fred C. Clark
Bull senior calf, 1, Horace Wright; 2, Fred C. Clark.
Bull junior calf, 1, Wm. McKinlay; 2, John Stewart.
Cow 3 years or older, 1, Gavin Harding, Jewel Sylvia; 2 and 3, Fred C. Clark, Jacoba Johanna.
Cow or heifer, 2 years old, 1, F. C. Clarke Johanna Mercides Poeh; 2, Gavin Harding, Orn, Rooker; 3, E. Heartz.
Heifer 1 year old, 1, J. M. Leard; 2, Fred C. Clark; 3, Gavin Harding, Little Emily.
Heifer senior calf, 1, Gavin Harding, Gay Lass; 2, Fred C. Clark.
Heifer junior calf, 1, Gavin Harding, Miss Mercena Posch; 2, W. J. Gibson.
Aged Herd, 1, Gavin. Harding; 2, Fred C. Clark.
Breeder's young herd, 1, Gavin Harding.
Bull and 3 of his get, 1, Gavin Harding, Artis Jake.
Cow any age and three of her offspring, 1, Fred C. Clark, Jacoba Johanna.
Champion bull, 1, Gavin Harding, Artis Jake.
Champion female, 1, Gavin Harding, Jewel Sylvia

AYRSHIRE GRADES.

Cow 4 year old and upwards, 1, Alex. Robertson; 2 and 3, Simmonds Bros; 4, Easton Bros.; 5, R. E. Longworth.
Cow 3 years old, 1, Tupper Ferguson; 2, Easton Bros.; 3, E. G. Love.
Heifer 2 years old, 1, Robert Stewart; 2, Easton Bros; 3, Tupper Ferguson.
Heifer, 1 year old, 1 and 3, Alex. Robertson; 2, E. G. Love.
Heifer senior calf, 1, Alex. Robertson; 2, Byrne Bros.
Heifer junior calf, 1, Hector McRae; 2, Tupper Ferguson.

JERSEY OR GUERNSEY GRADES.

Cow 4 years and upwards, 1, Roper Bros.; 2, Simmonds Bros.; 3, Easton Bros.
Cow, 3 years old, 1, Roper Bros.; 2, Easton Bros.
Heifer 2 years old, 1 and 2, Simmonds Bros.; 3, Roper Bros.
Heifer 1 year, 1 and 3, Simmonds Bros; 2, Wm. Gregory.
Heifer senior calf, 1, Joseph Carter; 2, Roper Bros.
Heifer junior calf, 1, Wallace Stead; 2, Wm. Clark.

HOLSTEIN GRADES.

Cow 4 years and upwards, 1 and 4, Peter M. Robertson; 2 and 5, Fred C. Clark; 3, Alex. Robertson.
Cow, 3 years old, Fred C. Clarke.
Heifer 2 years old, 1, Alex. Robertson; 2, Peter M. Robertson; 3, Fred C. Clark.
Heifer 1 year old, 1 and 2, Fred C. Clark; 3, Byrne Bros.
Heifer senior calf, 1, and 2, Byrne Bros.
Heifer junior calf, 1, Fred C. Clark; 2, Wm. McKinley.
Champion grade dairy cow sired by a Holstein registered bull, 1, Fred C. Clark.

SHEEP.

LEICESTERS.

Ram, 2 shears and over, 1, Samuel C. Lane; 2, A. H. Boswell.
Ram shearling, 1, Albert Boswell; 2, Wm. Clarke; 3, S. L. Boswell.
Ram lamb, 1, Wm. Clarke; 2, Albert Boswell Sr.; 3, S. L. Boswell.
Ewe, 2 shears and over, 1 and 2, Albert Boswell; 3, S. L. Boswell.
Ewe shearling, 1, Albert Boswell; 2, Wm. Clark; 3, S. L. Boswell.
Ewe lamb, 1, Albert Boswell; 2, S. L. Boswell; 3, Wm. Clark.
Best flock, 1, Albert Boswell; 2, Wm. Clark; 3, S. L. Boswell.

COTSWOLDS.

Ram 2 years old, 1, John Tweedy; 2, Byrne Bros; 3, Alf. Robertson.
Ram shearling, 1, John Tweedy.
Ram lamb, 1 and 2, John Tweedy; 3, Alf. Robertson.
Ewe 2 years old, 1 and 2, John Tweedy; 3, Alf. Robertson.
Ewe shearling, 1 and 2, John Tweedy; 3, Alf. Robertson.
Ewe lamb, 1 and 3, John Tweedy; 2, Alf. Robertson.
Best flock, 1, John Tweedy; 2, Alf. Robertson.

LINCOLNS.

Ram 2 shears and over, 1, Albert Boswell, Jr.; 2, Ernest Lund; 3, Geo. Boswell.
Ram shearling, 1, Albert Boswell, Jr.
Ram lamb, 1, Albert Boswell; 2, Ernest Lund; 3, Geo. Boswell.
Ewe 2 shears and over, 1, Ernest Lund; 2, Albert Boswell; 3, Geo. Boswell.
Ewe shearling, 1, 3, Albert Boswell, Jr.; 2, Geo. Boswell.
Ewe lamb, 1 and 3, Albert Boswell; 2, Geo. Boswell.
Flock, 1, Albert Boswell, Jr.; 2, Ernest Lund; 3, Geo. Boswell.

SOUTH DOWNS.

Ram 2 shears and over, 1, Cephas Nunn; 2, Oliver Saunders.
Ram lamb, 1, Cephas Nunn; 2 and 3, Oliver Saunders.
Ewe, 2 shears and over, 1, Cephas Nunn; 2, Oliver Nunn; 3, Oliver Saunders.
Ewe shearling, 1, Cephas Nunn; 2, Oliver Saunders; 3, Oliver Nunn.
Ewe lamb, 1, Cephas Nunn; 2 and 3, Oliver Saunders.
Best flock, 1, Cephas Nunn; 2, Oliver Saunders; 3, Oliver Nunn.

SHROPSHIRES

Ram, 2 shears and over, 1, Geo. Boswell; 2, A. H. D. Foster, 3, Wm. M. McRae.
Ram shearling, 1 and 2, Geo. Boswell; 3, Oliver Nunn.
Ram lamb, 1, Geo. Boswell; 2, A. H. Boswell; 3, Oliver Nunn.
Ewe 2 shears and over, 1, Geo. Boswell; 2, A. H. Boswell; 3, Oliver Nunn.
Ewe shearling, 1, Geo. Boswell; 2, A. H. Boswell; 3, Oliver Nunn.
Ewe lamb 1, Geo. Boswell; 2, A. H. Boswell; 3, Oliver Nunn
Best flock, 1, Geo. Boswell; 2, A. H. Boswell, 3, Oliver Nunn.

OXFORD DOWNS.

Ram lamb, 1 and 2, A. H. Boswell; 3, Geo. Boswell.
Ewe, 2 shears and over, 1, A. H. Boswell; 2, Henry Weatherbie; 3, Geo. Boswell.
Ewe shearling, 1, A. H. Boswell; 2, Geo. Boswell; 3, Henry Weatherbie.
Ewe lamb, 1, A. H. Boswell 2, George Boswell.
Best flock, 1, A. H. Boswell; 2, Geo. Boswell

HAMPSHIRE DOWNS.

Ram, 2 shears and over, 1, Cephas Nunn.
Ram shearling, 1, Oliver Nunn.
Ram lamb, 1, Cephas Nunn; 2, Oliver Nunn
Ewe, 2 shears and over, 1 and 2, Cephas Nunn; 3, Oliver Nunn.
Ewe shearling, 1 and 2, Cephas Nunn; 3, Oliver Nunn.
Ewe lamb, 1 and 3, Cephas Nunn; 2, Oliver Nunn.
Best flock, 1, Cephas Nunn; 2, Oliver Nunn.

LONG WOOL GRADES.

Ewe, 2 shears and over, 1, Wm. Clark; 2, Samuel C. Lane; 3, Albert Boswell, Jr.
Ewe shearling, 1, Albert Boswell Jr.; 2, Wm. Clark; 3, S. L. Boswell.
Ewe lamb, 1, S. L. Boswell, Jr.; 2, Samuel C. Lane, 3, A. H. Boswell, Jr.
Wether shearling, 1, S. L. Boswell; 2 and 3, S. C. Lane.
Wether lamb, 1 and 2, S. L. Boswell; 3, S. C. Lane.
Bast fat ewe or wether, 1, S. C. Lane; 2, A. H. Boswell.

SHORT OR MEDIUM WOOL GRADES

Ewe 2 shears or over, 1, Elijah Saunders; 2, Cephas Nunn; 3, Geo. Boswell.
Ewe shearling, 1 and 3, Oilver Saunders; 2, Elijah Saunders.
Ewe lamb, 1 and 3, Oliver Saunders Sr.; 2, Elijah Saunders.
Wether shearling, 1, Cephas Nunn; 2 Oliver Saunders.
Wether lamb, 1 and 2, Oliver Saunders.
Best fat ewe or wether, 1, Geo. Boswell; 2, Oliver Saunders; 3, Cephas Nunn.

SHEEP SPECIALS.

Hewson special for best flock of Shropshires, 1, Oliver Nunn.
J. A. Humphrey & Son's special for best collection of sheep carrying the best fleeces for the manufacture of tweeds, 1, Geo. Boswell.
American Hampshire special for best flock of 1 ram, 2 shearling ewes and 2 ewe lambs, 1, Cephas Nunn.
Do, for best pen of lambs two of each sex, 1, Cephs Nunn.

SWINE.

BERKSHIRES.

Boar, 2 years and over, 1, Samuel C. Lane.
Boar, 1 year and under two, 1, Peter Brodie; 2, John Stetson; 3, Roper Bros.
Boar, 6 months and under 12 months, 1, Samuel Ings; 2, Wood & Son; 3, A. P. Ings.
Boar, under 6 months, 1, Wood & Son; 2, Samuel Ings; 3, Peter Brodie.
Sow, 2 years and over, 1, Samuel Ings; 3, Peter Brodie; 3, Samuel Ings.
Sow, 1 year old, 1, Samuel Ings; 2 and 3, Peter Brodie.
Sow, over 6 and under 12 months, 1, Samuel Ings; 2, Peter Brodie; 3, Wood & Son.
Pair of pigs, 3 months old and under 6 months, 1, Samuel Ings; 2, John Stetson; 3, Peter Brodie.
Breeding Sow with litter, 1, Peter Brodie; 2, John Berrigan
Pen, consisting of 1 boar and 3 females, 1, Samuel Ings.

YORKSHIRES.

Boar, 1 year and under 2, 1, Roper Bros.; 2, Wallace Stead; 3, Geo. Crockett.
Boar, over 6 months and under 1 year, 1, Geo. Crockett; 2 and 3, J. W. Calbeck.
Boar, under 6 months, 1, A. A. McBeth; 2, Pope Cook; 3, Geo. Crockett.
Sow, over 2 years old, 1, Robert Stewart, 2, J. W. Calbeck; 3, Wallace Stead.
Sow, 1 year old, 1, A. A. McBeth; 2 and 3, Geo. Crockett.
Sow, over 6 months and under 1 year, 1, A. A. McBeth, 2 and 3, J. W. Calbeck.
Pair of pigs 3 months and under 6 months, 1,

B

Amatite ROOFING

ROOF PROTECTION *for the* FARM

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PEOPLE who have "smooth surfaced" roofs on their buildings find it necessary to *paint them continually* to keep them serviceable.

This expense and labor can all be cut out by using Amatite.

Its *real mineral surface* absolutely does away with *all* painting.

If you will write for a sample you will get an exact idea of what Amatite looks like. This will be immensely more satisfactory than any description we could give—no matter how minutely done. It is really the only fair way for you to judge,

Amatite is so thoroughly durable and reliable without any care or attention after you have nailed it on that, were its cost twice what it is, it would be still the most economical roof to buy. Its durability is unapproached.

It is easy to lay and requires no skilled labor to do the work.

In purchasing any ready roofing the question of whether it requires painting or not should be thoroughly considered. The busy man has no time to spend tinkering his roof every year or two. He wants to feel that when a piece of work of this sort is completed, he is through with it.

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Our assortment of all goods that go to make up a fire-place equipment is most complete, and includes :—

Wood Mantels and Grates,
Tiles—both English and American,
Fenders and Andirons in Brass and Black,
Spark Guards, Etc., Etc.

Catalogue will be mailed on request.

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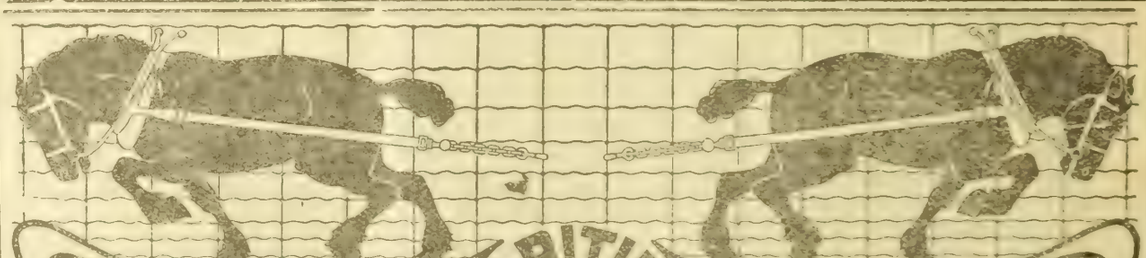

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The illustration demonstrates the phenomenal gripping-strength of our lock. Under the most unusual strain it never gives. It is known as the lock that can't slip; the lock that unfailingly holds the wires in their correct position.

Our Free Catalogue will tell you more about our can't-slip lock, and about the superior English high-carbon, hard-drawn steel wire from which Maritime Wire Fence is made. Address the card to

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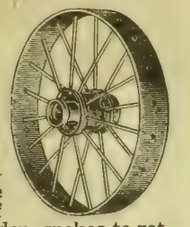

No bothersome, expensive resetting of tires. No wooden spokes to rot. You end your tire troubles with our Low, Wide-tire Steel Wheels. Lighter, stronger, cheaper than wooden wheels. Guaranteed not to break in coldest weather or on rockiest road. Fit any size axle. Catalogue free.

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Up-to-Date Courses of Study it is Possible to Provide.

The best teachers we can procure, and entire devotion to our students' interests.

Bring us all the business we can conveniently handle, without canvassing for a single student, or disparaging another school.

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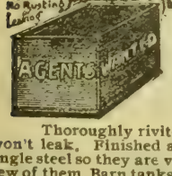
Minard's Liniment Co., Limited

Galvanized Steel Tanks



We make all kinds of tanks—any size, any shape,—round square or oblong. They are made of heavy, galvanized steel, so they can't rust

Thoroughly rivited and soldered so they won't leak. Finished around top with heavy angle steel so they are very strong and rigid—a few of them. Barn tanks and Cisterns—Bath room tanks—Milk Cooling tanks—Gasoline tanks—Oil tanks—Wind-mill tanks—Sheep dip tanks—Thresher tanks—Street Sprinkling tanks—Steel Water troughs—Hog troughs Etc.

Write for free catalogue. THE STEEL TROUGH & MACHINE CO. LTD., TWEED, ONT., CANADA.

A. A. McBeth; 2, Pope Cook; 3, Geo. Crockett.
Breeding sow with litter, 1, J. W. Calbeck, 2, Wallace Stead; 3, Geo. Crockett.
Pen, 1 boar and 3 females, 1, J. W. Calbeck.

TAMWORTHS.

Boar, over 6 months and under 12 months, 1, Walton E. Warren.
Boar, under 6 months, 1, Roper Bros; 2, James Roper
Sow, 2 years old, 1, Roper Bros; 2, James Roper.
Sow, 1 year old, 1, Walton E. Warren, 2, Roper Bros.
Sow, over 6 months and under 12 months, 1, James Roper.
Pair of pigs, over 3 months and under 6 months 1, James Roper.
Breeding sow, with litter, 1, James Roper.
Pen, consisting of 1 boar and 3 females, 1, James Roper.

CHESTER WHITES.

Boar, 2 years and over, 1, Leonard Court.
Boar, 1 year old, 1, Thos. W. Prowse.
Boar, over 6 months and under 1 year, 1, Leonard Court; 2, A. H. Boswell.
Boar, under 6 months, 1, Thos. W. Prowse; 2, Leonard Court,
Sow, 2 years old, 1, A. H. Boswell, 2, Leonard Court.
Sow, 1 year old, 1, Thos. W. Prowse, 2, Leonard Court,
Sow, over 6 months and under 1 year, 1, A. H. Boswell, 2, Lyle Boswell; 3, John Berrigan.
Pair of pigs, 3 months and under 6 months, 1, Thos. W. Prowse; 2, Leonard Court; 3, A. H. Boswell
Breeding sow, with litter, 1, Thos. W. Prowse, Newton Road; 2, Leonard Court,
Pen, 1 boar and 3 females, 1, A. H. Boswell.

EXPORT BACON HOGS.

Pen of 2 pure bred hogs, most suitable for export bacon, 1, J. W. Calbeck; 2, Pope Cook; 3, Geo. Crockett.
Best pair of Bacon Hogs, R. E. Mutch & Co. special, 1, J. W. Calbeck; 2, Geo. Crockett.

POULTRY.

Note— C. cock; h. hen; r. cockerel; p. pullet.

Andalusians, Geo. Chilton, 1 c.
Brahmas, Gilfourd Court, 1 c, 1 h, 1 r, 1 p.
Buff Cochins, Alfred Doyle, 1 c, 1 h, 1 r, 1 p; Neil A. McKinnon, 2 c, 2 h.
Dorkings, Neil A. McKinnon, 1 c, 1 h.
Hamburgs, Silver Sprangled, P. C. Brown, 1 c, 1 h, 1, 2 r, 1, 2 p; Geo. Chilton, 2 c, 2 h.
Hamburgs Golden Pencilled, Thos. S. Handrahan, 1 h, 1 r, 2 p; John F. Trainer 2 r, 1 p.
Hamburgs Silver Pencilled, Lyle Boswell, 1 c; A. H. Boswell, 2 c, 2 h, 2 r, 1 p; Thos S. Handrahan, 1 h, 1 r, 2 p.
Houdans, W. H. Whitlock, 1 c, 1 h.
S. C. White Leghorns, Geo. Chilton, 1 c, 2 h, 1 r, 2 p; Mrs. Chas. Robertson, 2 r, 2 p; Miss Ross, 1 h; Neil A. McKinnon, 2c.
S. C. Brown Leghorns, Geo. Chilton, 1 and 4 c, 4 r, 1 and 2 p, Neil A. McKinnon, 2 c; John Whitlock, 3 c. 1 r, C H. Wisner, 1 h, 2 and 3 r, 2 and 3 p; Mrs. Donald McKenzie, 2 h; Geo. Boswell, 3 h, Nora J. Ferguson, 4 h.
S. C. Buff Leghorns, Neil A. McKinnon, 1 c, 1 h; John Blanchard, 2 c, 2 h, 1 r, 1 and 2 p.
R C. Brown or White Leghorns, Geo Chilton, 1 h, Geo L. Simmons, 1 and 2 r, 1 and 2 p.
S. C. Black Leghorns, Geo. Chilton, 1 h, 1 p.
S. C, Black Minorcas, Geo. Chilton, 1 c, Henry H. Howard, 2 c, 1 h, 1 r, 1 and 2 p; Wm Cudmore, 2 h, 2 r.
S. C. White Minorcas, Geo. Chilton, 1 c 2 h; Byrne Bros, 2 c, 1 r, 1 p; Neil A. McKinnon, 1 h.
Buff Orpingtons, Albert Dutchemin, 1 and 2 c, 1 and 2 h, 1 r, 1 p; Pope Beer, 2 r, 2 p.
Orpingtons A. O. V., Aubrey White, 1 c, 2 h; C. H. Wisner, 2 c, 1 h, 1 p; Harry Lowe, 1 r, 2 p
Barred Plymouth Rocks, Heath Foster, 1 c, Neil A. McKinnon, 2 c; J. W. Ryan, 1 and 2 h, 1 c, 2 p; L. H. D. Foster, 3 and 4 h, 3 r, 3 p; Talmage Foster, 2 r, 1 p; John Whitlock, 4 r, W. R. Clark, 4 p.
White Plymouth Rocks, Mrs. Albert Boswell, jr 1 and 2 c, 1 h, 1 r, 1 p; J. W. Ryan, 2 h, 2 r; John Burke, 2 h.
Buff Plymouth Rocks, L. H. D. Foster, 1 c, 2 h, 2 r, 2 p; Earl Foster, 2 c, 1 h, 1 r, 1 p.
S. C. Rhode Island Reds, Chas. Stewart, 1 c, 1 h, Thos. W. Prowse, 2 c; Alfred Doyle, 2 h, 2 r, 2 and 3 p; Geo. Chilton, 1 r.
Black Spanish, A. A Paoli, 1 c, 1 h, 2 r, 1 p; S. Paoli, 1 r, 2 p; John F. Burke, 2 h.
Silver Laced Wyandotfes, John D. Fraser, 1 c, 2 h; Geo. Chilton, 1 h.
Golden Laced Wyandottes, Geo. Chilton, 1 h,
White Wyandottes,—Geo. Lightizer, 1 and 2 c, 1 and 2 h, 1 and 2 r, 1 and 2 p.
Buff Wyandottes, Geo. Chilton, 1 c, 1 h; Neil A. McKinnon, 2 c, 2 h.

SPECIAL PRIZES.

Best Barred Rock, male, Heath Foster.
Best Barred Rock, female, L. H. D. Foster.
Best White Rock, male, Mrs. Albert Boswell.
Best White Wyandotte, male, Geo. Lightzer.
Best White Wyandotte, female, Geo. Chilton.
Best Buff Orpington female, Thos. S. Harnahan.
Best dozen white eggs, 1, William Cudmore, 2, Chas. Thorne; 3, Mrs. Albert Boswell.

TURKEYS, GEESE AND DUCKS.

Bronze turkeys, over 1 year old, 1, Mrs. Albert Boswell, Jr.; 2, E. B. Boswell.
Bronzed turkeys, hatched in 1909, 1, Mrs. Albert Boswell; 2, E. B. Boswell.
Pair Toulouse Geese, 1, Albert Boswell, Sr.
Pair Embden Geese, 1 and 2, Mrs. Albert Boswell, Jr.
Prir Geese A. O. V., 1, Ernest Lund; 2, Mrs. Albert Boswell, Jr.
Pair of White Embden, hatched in 1909, 1, Mrs Albert Boswell, Jr, 2, Wallace Owen.
Pair young geese, A. O. V., 1, Ernest Lund, 2, E. B. Boswell.
Pair Rouen ducks, 1, Mrs. Albert Boswell, Jr; 2, Lyle Boswell.
Pair Perkin ducks, 1, Mrs. A. Boswell, Jr.; 2, Ernest Lund.
Pair Perkin ducks, hatched in 1909, 1, Mrs. A. Boswell, Jr

Don't Judge a Roofing By Its Looks

On the surface, most ready roofings look the same.

But the weather finds the hidden weakness.

The weather finds the vegetable fibers in the fabric and rots them.

The weather finds the volatile oils which are concealed below the surface. The sun draws these oils, in globules, to the top of the roofing, where they evaporate in the air.

Where there was a globule of air, there remains a hole. And behind each hole is a tiny channel which lets the weather and water into the very heart of the roofing.

When the sun and the wind and weather have sought out the hidden weaknesses, the roofing is porous, instead of solid; watersoaked, instead of waterproof.

You can't tell by looks, which roofing will last twenty years, and which will go to pieces in a single summer.

Seventeen Years of Service

But you *can* do this: You *can* tell the original Ruberoid roofing—the only roofing which *has* lasted seventeen years—from the 300 substitutes which have proven their unworthiness.

Ruberoid was the first ready roofing. Its basis is the best wool felt impregnated with Ruberoid gum.

It is this wonderful flexible gum which no other maker can duplicate.

It is this gum which gives Ruberoid all the flexibility of rubber without containing an iota of it. It is this gum which withstands wind, weather, sun, fire, acid, gases and fumes, where all other compounds fail.

It is this gum, in the Ruberine cement which accompanies each roll of Ruberoid roofing, which makes ours practically a *one-piece* roofing—sealed against leaks — sealed against the weather.

Ruberoid comes plain and in colors. The attractive Red, Brown and Green Ruberoid are fine enough for the costliest home. And the color feature is exclusive—protected by patents.

In the past twenty years we have had experience not only with all ready roofings, but with other roofings—shingles, tar, tin, iron and other roofings.

We Test All Roofings

Each roofing we have exposed to the weather test, on our roof garden at our factory.

The result of these twenty years of tests we have written into a book which will be gladly sent you free.

This book is a gold mine of roofing information, telling about the advantages and disadvantages of each roofing for each purpose. To secure a copy, address Dept 103 The Standard Paint Company of Canada, Ltd., Montreal.

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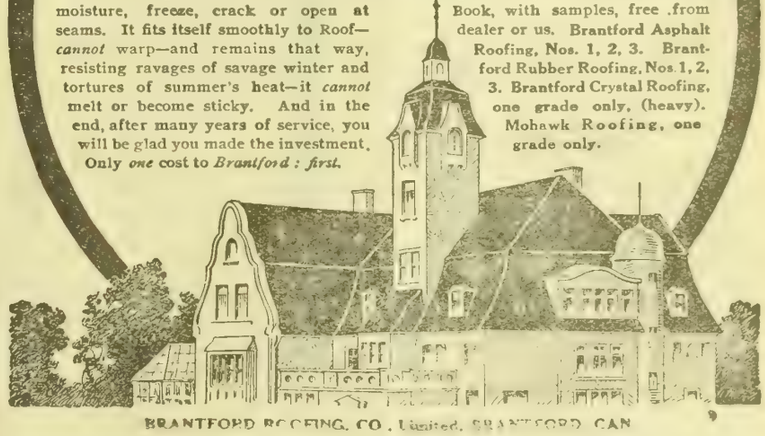
HOW LITTLE RAIN-WATER REBELS SECRETLY DESTROY MOST ROOFING

Rain-water is deadly to nearly all Roofing, except *Brantford*. It contains millions of little germs which eat away its very *life*, and you are not aware of this rebellion until Roofing is destroyed. Wood pulp, jute, cotton-cloth, etc., is used as a foundation in most Roofing. It is lifeless, and cannot fight for itself. The refuse coating which does not possess one particle of resistance, is itself injurious to Roofing. Slight bending will produce numerous cracks or open seams, because it is brittle. But the foundation of *Brantford Crystal Roofing* is a long-fibred, evenly condensed sheet of pure *Wool*, which goes through special Saturatory Process, forcing Asphalt saturation through and through, and becoming as hard as flint. This saturated Wool now, alone, is capable of resisting the onslaught of *any* enemy. But to make it doubly durable *Brantford* is heavily coated with weather-resisting, fire-proof Rock Crystals, which require no painting. After going through this process no Roofing Enemy can effect it.

Brantford Roofing

is pliable, and water, frost, snow, alkali, acid and fire-proof. It *cannot* absorb moisture, freeze, crack or open at seams. It fits itself smoothly to Roof—*cannot* warp—and remains that way, resisting ravages of savage winter and tortures of summer's heat—it *cannot* melt or become sticky. And in the end, after many years of service, you will be glad you made the investment. Only *one* cost to *Brantford : first.*

It needs no repairs, and *anyone* can lay it in any weather. Big Roofing Book, with samples, free .from dealer or us. Brantford Asphalt Roofing, Nos. 1, 2, 3. Brantford Rubber Roofing, Nos 1, 2, 3. Brantford Crystal Roofing, one grade only, (heavy). Mohawk Roofing, one grade only.



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ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

PRINTING.—Letterheads, $2.00 per thousand, up. Envelopes, $1.50 per thousand, up. Special facilities for stock breeders' supplies. Cash with order.—MARITIME PUBLISHING CO., Sussex, N. B.

WANTED.—A herdsman to take charge of an Ayrshire herd and Yorkshire breeding stock. Married man preferred. Four-room house and fuel provided. Apply S. J. GOODLIFFE, Sussex, N. B.

FOR SALE—Fine breeding pen, S. C. B. Leghorns, ten birds, only ten dollars. Pure bred W. Wyandotte eggs, per setting 75 cents. W. Pekin and Cayuga duck eggs, $2.00 per eleven. Newly hatched chicks 15 cents each, 50 egg Incubator, good as new, only $4.00. J. W. Hughes, Firgrove Bellisle Creek Kinds Co N. B.

WANTED.—One reliable man in each locality with rig or capable of handling horses, on salary or commission, to introduce and advertise our Royal Purple Stock and Poultry Specifics to the trade and direct, post up large bills, 7 feet wide and 9 feet high, tack up tin signs, and generally look after the introduction and advertising of our goods. Apply at once.—W. A. JENKINS MFG., CO., London, Ont., Canada.

SPECIAL OFFERING IN HOLSTEINS—"Chief Becker Mercenas" a grandson of Mercenas 3rd, has an official 7 day butter record of 25.87 lbs. Butter 85.7 p. c. fat. This bull is seventeen months old, is in fine condition, a fine individual of large size. Cow No. 1—6 years old, bred to the above described bull and due to freshen Oct. 20th, has proven herself to be an A1 cow and a very profitable producer. Cow No. 2 was 2 years old March 31st, 1909, dropped her first calf December 29th, 1908, is bred to the same bull and due to freshen Nov. 20th, 1909. She is a fair size for her age and has milked well for so young a heifer. No. 3 is a heifer that will be 2 years old Sept. 26th, 1909, is bred to Mercenas Sir Posch, owned by H. Bollert, of Cassel, Ont., and due to freshen Nov. 13th. She is one of the very best individuals of perfect dairy type and cannot fail to make a grand cow. As I have sold my farm I now offer this small bunch of choice Holsteins and every one is exceptional value for the money asked.—R. L. HICKS, Dalhousie Jct., Restigouche Co N. B.

POTATOES.

It never pays to rush the fall market in potatoes, especially when Cold Storage is at hand for overcoming the ordinary shrinkage in store. We can quote on straight storage or on bulk receipts, barreled, stored, stowed and delivered to steamer or car, as ordered. Write for our proposition.

The New Brunswick Cold Storage
(Limited), 672-690 Main St.
ST. JOHN, N. B.

PURE BRED SHEEP WANTED.

Breeders of Cotswolds, Leicesters, Shropshires, Oxford Down and Southdown Sheep are invited to send a list of their stock for sale to

The Department of Agriculture, Fredericton, N. B.,

with full information as to breeding, age, condition, etc., and prices. This information will be transmitted to the enquirers applying to the Department.

Breeders of pure-bred stock of all kinds who wish to supply New Brunswick buyers are also invited to list their offerings with the above mentioned Department where enquiries in regard to stock are being frequently received.

W. W. HUBBARD,
Secy. for Agriculture.

Fredericton, N. B., Aug. 20, 1909.

BUTTER AND CHEESE.

Butter, best box, made at any creamery, 1, W. A. McKay, Scotsburn, N. S.; 2, Sussex Cheese & Butter Co., Sussex, N. B.; 3, William F. Brow Cherry Valley, P. E. I.

Butter, best 2 firkins, home made, 1, J. H. Jones, Pownal; 2, James Essory, Union Road, 3, Mrs. Geo. Auld, West Cove Head.

Butter, best 2 firkins, creamery made, 1, W A. Scott; 2, W. F. Brow; 3, Sussex Cheesee & Butter Co.

Butter, best crock, 1, Mrs. Frank Andrews, Glasgow Mills; 2, James Essony; 3, Mrs. Geo. Auld.

Butter, 5 lbs. prints, home made, 1, Mrs. Daniel T. Fraser; 2, Mrs. L. H. D. Foster; 3, J H. Jones.

Butter, 5 lbs. creamey prints, 1, W. A. McKay; 2, W. F. Brown; 3, Sussex Cheese & Butter Co.

Cheese, best 2 Dairy farm made, 1, Mrs. John Drake, Pownal.

Cheese, best 2 factory, 1, John Muichison, North Wiltshire; 2, Chas. Cooke, New Perth West; 3, Angus D. McLellan, Bridgetown, P. E. I.; 4, T. S. McGrath, Morell; 5, Leo Hughes, Kinkora, 6, W. H. Leslie, Kensington.

Canadian Bank of Commerce, special prize for best 2 factory cheese, white or colored, made by a P. E. I. manufacturer, 1. Angus D. McLellan; 2, Chas. Cook; 3, John Murchison.

FIELD ROOTS AND VEGETABLES.

Best collection of field roots, 1, Arthur M. Burke, Southport; 2, W. B. Drake, Cromwell, 3, Patrick Curley, Charlottetown Royalty.

Best collection of vegetables, 1, Penelope, McKinnon, Charlottetown; 2, Arthur M. Burke; 3, John Rogerson, Hillsboro School.

FRUIT.

Collection, best 10 sorts or Commercial apples, 1, H. A. D. Almaine, Wolfville, N. S.; 2, John Robertson & Son, Inkerman, P. E. I.; 3, A. E. Dewar, Royalty.

Collection, best 5 sorts of apples grown on Prince Edward Island, 1, John Robertson & Son; 2, A. E. Dewar.

Collection of plums, 1, E. G. Love; 2, A. E. Dewar; 3, W. C. White.

Best collection of canned fruit, 1, Mrs. J. W. Warren, N. River.

Best Collection of preserved fruit in glass, 1, A. E. Dewar

STOCK NOTES.

MCPHERSON'S SHROPSHIRES — Mr. Andrew McPherson, Rocklin, Pictou Co., writes:

The inquiry for good breeding stock has never been better and in calling your readers' attention to our advertisement in the last two issues of the MARITIME FARMER of ram lambs and shearling rams, and to the ewes offered in this present issue, I would say that the quality of our 1909 lambs, sired by "Factoterie" out of "Belvoir Sirdas", justifies us in paying the price we paid for him. They are without exception the best covered and most uniformed lot we ever offered for sale. Although quite young, as they were only dropped in May, they are very thrifty and are the low down blocky sort that gives a good account of themselves. On account of being somewhat over crowded we are offering a few ewes that are regular breeders. We offer a first class chance for any one wanting to start a pure-bred flock at a moderate cost. The ewes will be bred to our imported ram if desired.

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It is to the advantage of every housekeeper in Canada to use them

Magic Baking Powder.
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Registered Guernsey Stock at Greatly Reduced Prices.

Three cows, 4 young bulls, 3 heifers. This stock is from cows that give a good flow of milk and test from 5.4 to 6% butter fat.

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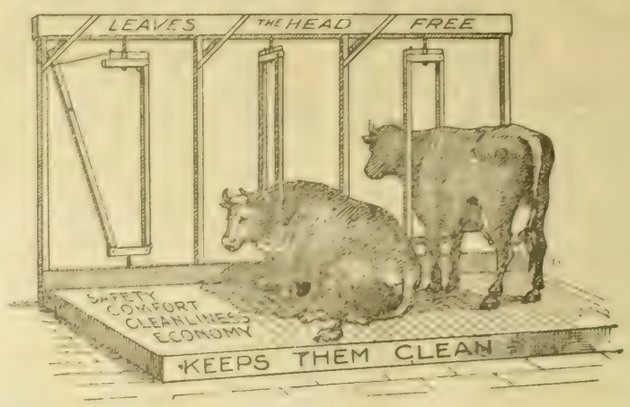
Berwick, N. S.

The Maritime Stantion Patented 1906.



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Club Roots.

J. P., N. S.—What is the cause of club root, or finger and toe, in turnips, and the remedy if known?

Ans.—Club root is a fungous disease which is prevalent throughout the Maritime Provinces, and when once the soil is infested with the spores, if neglected, it is very difficult to get rid of. The fungus belongs to a division known as the Slime Fungi. The spores do not float in the air as with some other kinds, but remain in the soil to attack crops grown subsequently on the same land, if these belong to the cabbage family, such as turnips, radishes, cauliflowers, etc. The best treatment is to put the land under a regular rotation of crops, so that no plants of the cabbage family are grown on the infested land for at least four or five years. As a direct remedy fresh stone lime should be applied to the surface of the land, at the rate of 37 bushels to the acre. This should be done in autumn and left to slake during the winter. Gas lime in an equal quantity may also be used if this is obtainable. In the following spring the land should be ploughed lightly, and seeded to clover; after the clover is turned down, plant corn or potatoes, follow with a grain crop and grass, after which the land may be used again for cabbage or turnips.

Your cough annoys you Keep on hacking and tearing the delicate membranes of your throat if you want to be annoyed. But if you want relief, want to be cured, take Chamberlain's Cough Remedy. Sold by all dealers.

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$7 to $10 Per Week.

We want reliable parties to knit for us at home, whole or spare time. We furnish machine, yarn, etc. Send your name and address at once for full particulars.

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When you are in doubt as to selling possibilities

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When you think it is going to rain and the reaper has been very very busy all day

(Ring the weather man. **Instantly** you know whether you must take to the fields with all hands, or sit down and smoke the pipe of peace.)

When your barn is on fire

(Ring your nearest neighbor. **Instantly** you know that as fast as animals can travel, fellow tillers of the soil will come to your aid.)

Every day you will find your 'phone "a friend indeed" and it will prove to be a "payer" too.

Booklet 2816 is free for the asking. Tell us we ought to send it to you.

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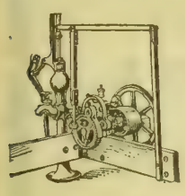

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260 Acres. Stock, Tools and Machinery

No better farm in the state, 1000 Baldwin apple trees in their prime, cuts 65 tons hay, spring watered pasture for 40 cows, 1000 cds wood will sell for $5500; good school and neighbors; 2-story, 10-room house, barn for 30 head, stable with cellar; owner includes cows, poultry, wagons and tools for only $3900; all details of this and other money-making farms in So. Me page 124, "Strout's New Farm Buyers' Guide No 28," just out, copy free. Dept 2611. E. A. Strout, Kent's Hill, Maine.

FLORICULTURE.

Leave your Lily of the Valley plants in the ground, they are a hardy, perennial but matured prips or crowns can be forced at any time of the year, provided they have had a dormant period (a rest) In regard to Rose Crimson Rambler you can leave it in the ground, but in a late November after first heavy frost, lay it down on on the soil, cover it with a few inches of soil and over that place six inches of straw, manure, dead leaves or similar material. Do not think it will stand the winter here in open ground without being protected. Do not uncover until the first of May. Cuttings taken from roses growing in open ground will seldom root in summer months or in any high temperature. Cutting from open ground plants made from ripened wood after growth ceases in the autumn can be rooted if placed in sand or soil kept moist and not allowed a temperature of over 40 or less than 30, under these conditions the cuttings will root in from three to four months. Propagating of rose cuttings in high temperatures have to be cuttings taken from roses growing under glass.

If you wish to increase roses in the open grounds the safest way is to layer them which may be done from spring to September by bending down a shoot, the wood of which should be well matured at the portion to be worked, cut a slit in the stem half way through and split the shoot for about an inch, scoop out a shallow trench in the soil, let a few inches of the end of the shoot remain in the air. Cover the cut portion firmly with soil and lay a turf or sod over it and keep moist and in six weeks roots will be started out from the parent plant and transplant or pot, forming a new plant.

Callas can be repotted at any time of the year, any good garden soil will answer. They grow best flooded with water. They should have three months rest perfectly dry every year, seperate at the end of dormant period when potting up. If your Oleander is root bound give it Liquid manure freely. Lack of nourishment is probably the cause of blighted beds.

Do not try to force your Chrysanthemums, they have their own period of blooming according to habit of varieties, early to late and cannot be forced except at the expense of vitality of the plant and consequent inferiority of bloom. They should never be allowed to dry out as it hardens the wood and injures the bloom. Keep them cool, give them all the sun and air and give all the water they need, always having good drainage when pots are well filled with roots, feed liberally with weak liquid manure up to the time buds show color then cease feeding or injury may result to color the bloom.

Please give some information for growing Carnations, says a St. John amature. I have some about six inches high kept under glass (is this beneficial), when should they flower and what conditions do they require? I understand from others who have tried that it is very difficult to culture.

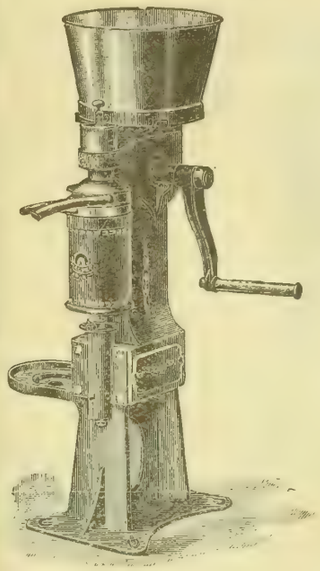
Carnations should not be a difficult plant to grow if properly treated. The plant when set out should be staved firmly and thoroughly watered. Plant out in four inch pots one bud of good size. They want a sunny bed with light soil which should be well watered. Do not think Carnations should be kept under glass, after June they will stand light frosts without injury, I think they grow better if planted the last of May rather than the last of June. Carnations respond quickly to liquid manure as soon as well rooted, but they should never get any stimulant until they are thoroughly rooted. If large flowers are wanted they should be disbudded, only one bud being allowed to remain on a stem. Carnations should bloom from the middle of July until after frosts when, if potted they will bloom until Christmas.

All our customers are satisfied customers. S. P. GOUDEY, Seedsman, Yarmouth,

Wake Up, Dairymen!

Use Your Eyes Before You Buy a CREAM SEPARATOR.

THE MAGNET.



Steady as a Rock.

LOOK at the STAND and if it is so STRONG and RIGID that it can be set up and OPERATED ON THE GROUND or any floor it is the MAGNET, because it is the only one built that way. LOOK INSIDE and if you find it has a STRONG and PERFECTLY ARRANGED SQUARE GEAR, again you WILL KNOW it is a MAGNET, as it is the ONLY ONE BUILT THAT WAY, and YOUR JUDGMENT will tell you that it is the MACHINE to buy, even if it is a LITTLE MORE IN PRICE, because it WILL WEAR LONGER and be CHEAPER IN THE END. Then look at the MAGNET'S EXTRA LARGE bowl, which IS SUPPORTED AT BOTH TOP AND BOTTOM, when ALL OTHERS have only ONE END SUPPORTED. A PERFECT BRAKE, which ENCIRCLES the BOWL, A SKIMMER in ONE PIECE that takes out ALL THE BUTTER FAT, at the same time separates ALL IMPURITIES, and the MAGNET is SO EASY TO OPERATE, A CHILD CAN TURN IT. If you buy a MAGNET, the size CAN BE INCREASED to larger sizes, up to 1,000 LBS. AN HOUR IN THE SAME MACHINE, and A CHILD CAN TURN THAT SIZE ALSO. Your close examination will show that the MAGNET is NOT SLIGHTED IN ANY PART, and that each part is so built and fitted together that the machine will not wear out in 50 YEARS.

It will cost you one cent to look the Magnet over and try it in your own Dairy—better spend the cent on a postal card NOW.

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Branches : Winnipeg, Man.; Regina, Sask.; Calgary, Alta.; Vancouver, B. C.; St. Nicholas Building, Montreal, Que.

Wanted—Ten good men, apply Maritime Branch, St. John, N. B., Box 216.

AGENTS WANTED!

Any farmer can qualify.

No investment required.

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70 acres in sunny southern Me. for only $800, half cash well located and productive, 20 acres in fields for all crops, brook watered pasture for 10 cows, 40,000 ft. timber and the big wood lot will more than pay for the farm; cottage house and barn supplied with spring water; owner, who lives in distant town, will throw in crops, mowing machine and the other farming tools, grindstone and hayfork; only $400 cash gives you a comfortable money making home; all details of this and other Me. bargains page 125 "Strout's New Farm Buyers' Guide No 28," just out, copy free. Dept. 2611 E. A. Strout, Kent's Hill, Maine.

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Pair Horses. 12 Cows and Heifers Thrown In.

110 acres, ½ mile to school, 2 to village abundance fruit and wood; good 7-room cottage convenient barn, 40x48, carriage house, 50-foot, poultry house, never failing running spring water piped to buildings; 10 acres were in crops this year; going West next month and will include 7 good cows, 5 pretty heifers; pair work horses: hay and fodder to winter; carts, sleds, wagons, sleigh, harnesses, tools and improved machinery for the low price of $2800, half cash, easy terms. Box 67, Kent's Hill, Maine

Do you want better Seeds? Do you want them for less money? Get the Secretary of your Association to write for particulars. S. P. GOUDEY, Seedsman, Yarmouth N. S.

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TO DAIRYMEN !

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Are Largely Imitated, but Never Equalled.

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Having Fewer Working Parts

Is more simple,
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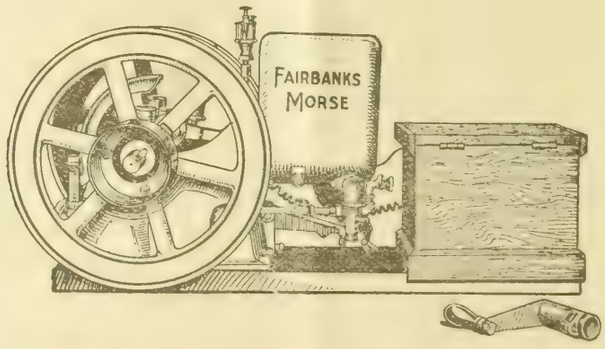

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AND

CO-OPERATIVE DAIRYMAN.

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Volume 15. Sussex, N. B., October 26, 1909. Number 2.

OUR VANISHING BIRTHIRIGHT.

By A. H. D. Ross, M. A., M. F.

Faculty of Forestry, University of Toronto.

THE lumber areas and farm wood lots of the Maritime Provinces are so ruthlessly butchered, without a seeming thought for the wants of future generations, that we reproduce, from the March number of The Canadian Magazine, "Our Vanishing Birthright," an excellent treatise on our forests by A. H. D. Ross, M. A., M. F., University of Toronto.

We trust our readers will peruse it carefully and apply its teachings wherever possible to the conservation of our native forests :

"The effects of the forest upon its surroundings are so important and far-reaching that it may well be likened to "Nature's Balance Wheel." Its importance does not consist merely in the immediate output of lumber, ties, timber, fuel, pulpwood and other forest products; but also in its regulation of the stream flow, the prevention of soil erosion, the formation of a good game cover and its ameliorating influences upon climate. By retarding evaporation, checking the drying effects of winds, rendering the soil more porous and fertile, retaining the moisture favorable to agriculture, and regulating the flow of water in the streams, it is of the highest importance in the general economy of nature. Through mighty cycles of time vegetable growth and tree growth have wrought incessantly to clothe the rocks with life and beauty and to prepare the earth for the habitation of man. Wherever man has disturbed the nice balance that exists between the forested and non-forested areas he has been severely punished, but where he has restored the proper balance his efforts have been generously rewarded by better climatic conditions, increased fertility of soil, and a more equable stream flow.

"Almost everywhere in the great characters in which Nature writes her chronicles there are indications that Egypt, Syria and Persia were formerly densely wooded and traversed by streams which are now dried up or shrunk within narrow bounds. Once the garden spots of the world, where Nature rewarded the labors of the cultivator with lavish profusion, they are largely desolate and infertile regions, incapable of supporting a tithe of their former populations—the once mighty Persian Empire being reduced to an average of only fourteen inhabitants to every square mile. British India, Turkey, Spain, Southern France, and parts of Italy and Russia also know, to their cost, that a disturbance of Nature's Balance Wheel means a reduction of soil fertility, the general impoverishment of the people and a constantly diminishing population. Not until it has disappeared does mankind seem to realize that the preservation of the forest is just as indispensable to civilization as tilled fields. In Southern France the destruction of the forest, just after the Revolution, resulted in violent floods, which in a few years rendered eight million acres of fertile land unfit for cultivation. Already the French Government has spent $40,000,000 in an effort to reclaim the agricultural land destroyed by erosion, and it is estimated that fully $100,000,000 more must be spent before the work is complete. In this one instance alone the restoration of Nature's Balance Wheel will cost the French Republic $140,000,000, plus the value of the crops, which might have been grown on 8,000,000 acres of fertile land during all these years, plus the value of the timber crop, which should have been growing on the denuded areas. Only slowly does it seem to dawn upon the public mind that the loss of our forests, without adequate restoration, will be the deadliest imaginable blow to our future progress and prosperity. A prosperous nation cannot be built up in a desert, nor can a people continue in power and affluence when the territory from which they draw their sustenance shall have receded into barrenness by the ruthless destruction of the forest cover—by the removal of Nature's Balance Wheel.

"The water powers of Canada vastly excel those of any other country, and have been estimated to be equal to forty per cent. of the total water power of the world. The preservation and proper utilization of this great national asset for the development of electric energy, for irrigation in the West, and for navigation in all parts of the Dominion depends upon the preservation of the forest on all lands known to be unsuitable for agricultural purposes.

"There can no longer be any doubt that electric energy is to be the great motive power of the future, and that in many matallurgical operations it will play a leading part. It should be remembered, however, that the efficiency of a stream for power purposes depends upon the amount of energy it is capable of developing at the time of low water. Here we have an additional reason for the preservation of the forest cover. Without it we will have the destructive spring freshets and the long summer drought. With it we will have a much more equable stream flow and the development of plenty of electrical energy for industrial purposes. With the electrification of our railways we would largely eliminate the fire peril—especially in the exceedingly inflammable spruce forests of the north country, through which the Grand Trunk Pacific and other railway lines are to run.

"Still another reason for the preservation of the forest on all non-agricultural land is the protection it affords to fish and game. Without forests we cannot have a constant supply of pure, sweet water in our streams, and without such water in abundance we cannot have fish. A board of fish commissioners once asked a Scotch game warden why the salmon were no longer running up a once famous river, and to their surprise were answered : "Ye canna hae feesh when ye hae stoppit the water." There is the whole story in a nutshell. In a recent address before the Toronto Canadian Club, Mr. Cy Warman said: "Protect your forest while you have it, for when it is gone you will be utterly helpless. . . . Destroy your forests, and your game will go; your rivers will dry up; your fish will die, and desolation will brood over this land that God has made so fair."

"All over Canada huge tracts of woodland and timberland are annually devastated by fire, involving the loss of millions of dollars' worth of property which might easily be prevented by the exercise of a little care on the part of settlers, prospectors, hunters, and railway employees. The lumberman pursues a legitimate business, and in time will learn to conduct his operations so as to secure another crop, and in many cases a better crop, from his cut-over areas; but the man who is responsible for the destruction of forest property, public or private, is a positive menace to the well-being of the country. In the Labrador Peninsula I have seen great stretches of country which were burned over by the Indians to clear the ground for hunting. Members of the Geological Survey of Canada, who have travelled the country west of Hudson Bay and north of the Saskatchewan River, tell me that forest fires are of very frequent occurrence. Lumber enough to build whole cities, ties enough to supply complete railway systems, and enough fuel-wood for the entire population of the Dominion are annually swept out of existence by the fire fiend, without exciting the slightest interest.

"The careless burning of brush by settlers is also responsible for many forest fires. By prohibiting the burning of brush and stumps in very dry weather and the exercise of a little common sense, almost every fire started in this manner could be prevented. Other fires are caused by the carelessness of campers, the deliberate firing of the woods to facilitate the work of prospecting for minerals, and sparks from railway locomotives. Danger from the latter source can be almost entirely eliminated by equipping the locomotives with suitable spark arresters, as is shown by tests made during last summer on the lines of Alberta and Irrigation Company, and during the last two years on the Quebec and Lake St. John Railway.

"What we need in Canada, above everthing else, is a thorough understanding of what the disappearance of the forest would mean to us as a nation and the cultivation of a strong public sentiment to back the enforcement of laws designed to prevent forest fires. The deliberate firing of the woods is a criminal offence that should merit the same punishment as setting fire to a building in a crowded city; and the man who is careless about the use of fire in the bush is an absolute menace to the welfare of the whole country.

"Hitherto our forests have been regarded by the pioneer as a foe, by the lumberman as a source of wealth, and by the Government as a means of revenue. Since Confederation our export of unmanufactured and manufactured wood products has reached the enormous value $1,139,360,034—the average for the forty-one years being $27,789,281; rising from $19,651, 706 in 1868 to $49,507,528 in 1908. This is about one and a third times the value of the agricultural products export-

ed during the same period, and four times the value of the fish exported.

During the last five years the average annual revenues derived from the forest lands, controlled by the Federal and Provincial Governments, have been as follows: Dominion, $335,289; Ontario, $2,082,878; Quebec, 1,217,795; British Columbia, $463,077; New Brunswick, $230,098; Nova Scotia and Prince Edward Island, not stated This gives a total of $4,329,127—say, four and a half million dollars for the whole Dominion. From these figures it will be seen that our forests have been a great source of wealth in times past. Unfortunately, however, this rich harvest cannot be reaped much longer, unless prompt measures are taken for the economic use, protection and reproduction of our woods. For years we have been talking about "Canada's inexhaustible timber resources," without knowing whether the statement was true or false. During the last ten years, though, enough information has been obtained to show that the amount of our standing timber, of commercial sizes, is very much less than we fondly imagined it was. The accessible saw-log timber is estimated by Dr. Fernow at six hundred billion feet, board measure—enough to supply the United States fifteen years. Unquestionably we have very large quantities of pulpwood; although this, also, has been greatly over-estimated. If properly managed, the revenue derived from our pulpwood should be quite as great as that obtained from the sale of our saw-log timber. The whole civilized world is looking to Canada for a supply of pulp and paper, as well as lumber, and if we are wise in our day and generation we will carefully husband these resources.

Every year our forest areas are being steadily drawn upon for the production of sawn lumber, railroad ties, construction timber, fuel, pulpwood, telegraph and telephone poles, fencing, lath, shingles, cooperage stock, and other forest products. According to the census of Canada for 1900, nearly nine million cords of firewood, 668,034 cords of pulpwood 12,000,000 cubic feet of square, flat and wany timber, 300,329 pieces of piling, 255,000 telegraph and telephone poles and 17,000,000 fence posts were cut. Expressed in broad measure, this amounts to a trifle over ten billion feet. With our constantly increasing population, the amount is sure to increase, and it is now somewhere in the neighborhood of eleven billion feet.

The latest available figures indicate that the following amounts of sawn lumber are now being produced every year: Ontario, 1,335,000,000, board feet; Quebec, 1,292,000,000; British Columbia, 657,000,000; Nova Scotia, 294,000,000; New Brunswick, 291,000,000; the Dominion lands in Manitoba, Saskatchewan and Alberta, 141,000,000; Prince Edward Island, 6,000,000—a total of 4,016,000,000, or a trifle over four billion feet per annum. During 1907, the amount of sawn lumber produced in the United States was forty billion feet.

For the maintenance of our railways alone, we will require enormous amounts of timber every year. At present we have 27,517 miles of track in operation or under construction. The average number of ties being about 3,000 per mile and the average life of each between six and seven years, it will be seen that over 14,000,000 ties - 392,000,000 board feet—will be required every year to keep the tracks in repair. For the construction of bridges, station houses, etc., the railways also require large quantities of timber—probably 200,000,000 feet a year. Altogether, the Dominion is using somewhere between fifteen and sixteen billion feet, board measure, per annum of lumber, fuel and other forest products; or 2,818 boad feet (235 cubic feet) a year for every man, woman and child in the country. For lumber alone it is 730 feet.

When we remember, too, that nearly seven hundred feet of timber remains in the woods for every thousand taken out, it will be seen that the actual consumption is much higher than I have indicated.

In the past our timber interests have been closely indentified with those of the United States, and in the near future they will be even more closely identified. Mr. Gifford Pinchot, chief of the United States Forest Service, says that their forests are being chopped down three and a half times as fast as they are growing, and estimates that they will be exhausted in about twenty-five years, unless immediate steps are taken to prevent the enormous waste due to forest fires and destructive methods of lumbering. President Roosevelt regards the conservation of the timber and mineral wealth of the Republic as their most serious internal problem, and recently sent Mr. Pinchot to Ottawa to invite the Canadian Government to send three delegates to Washington to confer with three appointed by the Mexican Goverment and three representing the United States. The findings of this joint commission will unquestionably be that the whole North American Continent has very much less timber and mineral wealth than is generally supposed.

During the fiscal year 1908 Canada exported forest products and manufactured wood products to the value of $49,000,000, $31,000,000 worth going to the United States, $13,000,000 worth to Great Britain, and $5,000,000 worth to other countries. As the United States timber becomes exhausted, our exports will increase very rapidly. During the last five years the general cost of wood used for mechanical and chemical pulp has more than doubled in the Eastern States, which has resulted in the importation of large quantities of pulpwood from the Maritime Provinces. In 1904 we exported 479,238 cords of pulpwood; in 1905, 293,624 cords; in 1906, 614,286 cords; in 1907, (9 months), 452,999 cords; and in 1908, 902,311 cords.

In his evidence before the Ways and Means Committee of the United States Congress, Representative Clark, of Missouri, expressed the opinion that free trade in lumber would tend to prevent the devastation of American forests, and it did not matter whether Canada did devastate her forests!

This is certainly a very candid statement of the present condition of affairs.

The best informed of our American cousins frankly tell us that in the reckless cutting and burning of their timber they have lost what cannot be replaced in a couple of centuries and then only at a cost of billions of dollars. If, therefore, Canada only remains true to herself and properly protects her forests she will reap the benefit of their mistake and yearly draw from their pockets many millions of dollars.

In the Province of Ontario the export of pulpwood cut on Crown Lands is prohibited, and the result is that a large number of pulp and paper mills are being erected and giving employment to a great many workmen at good wages. In Quebec the export duty is only twenty-five cents a cord, which is not sufficient to build up a large industry within the borders of the province. Besides this, the high prices offered by American buyers are resulting in the stripping of all pulpwood timber from private holdings, thus turning many parts of the province into "man-made deserts." In New Brunswick there is now a strong agitation for the imposition of a prohibitive export duty on pulpwood. In the opinion of the writer, the proper thing would be to entirely prohibit the export of pulpwood from Canada. The result of such a measure would be to build up a very large pulp and paper industry, give employment to thousands of skilled workmen and enable us to command the pulp and paper trade of the world. In Newfoundland the export of pulpwood is entirely prohibited. The result is the erection of two of the largest pulp and paper mills in the world, and the probable establishment of others in the near future.

In his address before the Ottawa Canadian Club a few weeks ago Mr. Pinchot said: "In dealing with the common problems for the common good of the people of the United State, we are trying to use business common-sense. As a people, we are trying to handle our affairs with the same prudence that every man in this room would exercise in the conduct of his own private affairs. We are the trustees for the future of the people of the twentieth and twenty-first centuries. What we do now with the resources on which they are to depend for their lives when they come will control the kind of life they will live . . . We are at the parting of the ways, and if we do not make the right decision soon the flight of time will make it for us and make it wrong."

Sir Dietrich Brandis, the father of the present system of foresty in British India, in a letter written to the Dominion Superintendent of Forestry, some two years ago, said: "I cannot sufficiently urge upon you the necessity of concentrating all your energies upon one point, and that is the constitution of as large an area of State forests as possible . . . Norway and Sweden are cutting more timber than their forests annually produce and must soon cease to export. The United States now export little to England, and Canada is the only country from which a permanent supply of coniferous timber can be expected. All this means that prices will rise steadliy, and it is for you in Canada to now seize the opportunity and lay the foundation of a magnificent future developement of your forest wealth. Hence it is necessary that you should form as large an area as possible of State forests, and that you should place them under efficient, systematic management, so as to secure ample regeneration of the species you want."

It is interesting to notice that Sir Dietrich has charge of 200,000 acres of forest land in India, much of which has been burned over repeatedly by the natives and is in very bad condition. So far he has managed to efficiently protect 30,000 square miles of it from fire, at an annual average cost of half a cent per acre. The net revenue derived from the whole property is nearly three million dollars a year, and will rapidly increase as more and more of it comes under proper management.

All history proves that while the private individual makes the best farmer, the State makes the best forester, and perhaps the only safe forester. Being a permanent institution, it can exercise its providential function and make provision for the future. In Germany the scientific treatment of forest properties has reached its highest development. With her rapidly increasing population, Germany needs land for her people to settle on much more than we do, yet she carefully preserves the forest on all the principal hills and other rough spots. France is perfecting a most practical and effective system of forestry. Norway and Sweden have practically eliminated forest fires and are working towards the preservation of their timber wealth. In Japan the national Government has employed a German forester (Dr. Mayer), and her intelligent, industrious people are rapidly restoring her forests to their former condition. In Australia, New Zealand and Cape Colony, State forestry has already made some advance. In the United States some 171 Federal forest reserves, containing 175,000,000 acres, or 273,437 square miles, have been created and placed under management. In Canada, the Dominion Government has set aside 5,391 square miles of forest reserves and 18,467 square miles of national parks, situated in the four Western Provinces. In Ontario, the Provincial Government has established 15,308 square miles of forest reserves and the Algonquin National Park of 1,930 square miles. In Quebec a great forward stride has been made by the setting aside of no less than 166,795 square miles of forest reserves and 4,595 square miles of National Parks. New Brunswick and Nova Scotia have as yet no reserves.

So far very little has been done to place these Canadian reserves under management. Obviously, the first important duty is to protect them from fire and timber thieves. The next will be to classify the land outside the reserves, retaining the good land for agricultural purposes and setting aside the poor land for the growing of timber. In Ontario, for example, we should have at least 90,000 square miles of reserves. The next forwasd step would be for each Government to regulate the cutting of its own timber in a way as to give the young growth a chance to reach maturity. Our people are sufficiently patriotic to support any government which looks well to the future and takes the necessary steps for the establishment of a far-sighted forestry policy based upon a scientific and permanent basis.

From the foregoing it is surely evident that the conservation of our forest wealth — the retention of Nature's Balance Wheel—means the possession of plenty of wood for various purposes, a perpetual revenue from the sale of our forest products, and the consequent lessening of our taxes, the building up of wood-working industries, the assurance that navigation will always be possible upon our principal rivers, the extension of our irrigation schemes in southern Alberta, the development of cheap power in all parts of the Dominion, the retention of the soil moisture necessary for agriculture, the preservation of our fish and game, and the tempering of our climate.

Value of Rotation.

One of the most essential things Along the line of improvement even of as great importance as thorough tillage, is proper crop rotation.

In rotating crops the idea is to so vary the crop that the demands on the soil will be different, it being now fully established that one kind of growth makes one demand on the soil and another something different. It is very interesting and useful to notice the way the various crops occupy the soil.

The power of roots deserves consideration. A plant, like clover, for example, has great ability in gathering nitrogen, and another, like wheat, no power.

The weight of roots also varies largely in different growths. Clover has several times as much roots as wheat, and the roots of clover are much richer in nitrogen than those of wheat. On this account wheat follows clover advantageously.

We have known this to be a fact so strikingly that twice the ordinary yield for the neighborhood was so produced year after year. There are other advantages. By a good system of rotating crops, the insect and fungoid enemies that prey upon the particular growths, get starved out or seriously interfered with. This is based on the fact that each plant has its own particular enemies. Such is especially true of the plant that is above the ground.

We will be the more impressed with the importance of the rotation of crops if it is remembered how much call each crop makes upon the soil. Thus, while wheat say, takes only 1 1-4 pounds of potash for every pound of phosphoric acid, potatoes takes 3-14 pounds of potash for each pound of phosphoric acid. Potatoes grown continuously would exhaust the potash of the soil or of that supplied by manure, long before that of phosphoric acid would give out.

The character of the leafage is to be taken into consideration also. The leaves vary in their season of active growth and are both broad and narrow.

The labor element plays a part in rotation, as the system is best suited for home consumption of crops and the return of the fertilization to the farm. The practices of thousands of years all points to its importance.

Lame back comes on suddenly and is extremely painful. It is crused by rheumatism of the muscles. Quick relief is afforded by applying Chamberlain's Liniment. Sold by all dealers.

The best Seeds, bought by the carloads and sold to Farmers' Associations and Agricultural Societies, at 5% commission, by S. P. Goudey, Yarmouth. Twenty years experience.

Local Exhibitions in Nova Scotia

The fall of 1909 has witnessed the most successful series of fall exhibitions ever held in the Province of Nova Scotia. For a number of years, prior to 1907, aside from the Provincial Exhibition, there were never more than three local exhibitions annually held. But the present administration is impressed with the possibilities for good which exist in the local show and has increased its financial support to these exhibitions six times over. Moreover, there exists in Nova Scotia to-day a greater spirit of enthusiasm and optimism in regard to agriculture than has here-to-fore prevailed, and hence the local support of these exhibitions is of the most thorough going and enthusiastic kind.

Altogether, there have been held during the months of September and October eleven local exhibitions, as follows: The Nova Scotia Fruit Exhibition, Middleton, Annapolis Co.; the Digby County; Exhibition, Bear River; The Yarmouth County Exhibition, Yarmouth; The Shelburne County Exhibition, Shelburne; The Queens County Exhibition, Caledonia; The Lunenburg County Exhibition, Bridgewater; The Colchester County Exhibition, Stewiacke; The Pictou County Exhibition, Pictou; The Antigonish County Exhibition, Antigonish; the Guysboro County Exhibition, Guysboro; the Cape Breton County Exhibition, North Sydney. The attendance at those exhibitions has varied from one thousand in some of the smaller places to seven thousand, with an average of considerably over three thousand, and this despite rather inclement weather. Moreover, supported as they have been, by the public, every local exhibition will this year have a surplus.

The exhibits have universally been of a most excellent character. Of course, in some of the less extensive agricultural counties the exhibits were naturally smaller and scarcely up to the average of those in the more distinctly agricultural counties. But even in these lesser agricultural Counties there were exhibited in some cases, vegetables, in others fruit, or cattle, which were a revelation to visitors as to the possibilities of the various parts of the country. The fact is, that Nova Scotian farms, when given a proper chance, can produce field products and live stock which cannot be excelled. More especially is this the case with the various vegetables, roots, fruit, etc., which are produced under the most favorable circumstances in this province, where even in the middle of summer, humid couditions generally prevail,

The judging at most of the exhibitions was, for the most part, done by expert judges supplied by the Provincial and Dominion Departments of Agriculture. The general management was under the direction of Mr. F. L. Fuller, Superintendent of Agricultural Societies and Associations. Among the judges, the following may be mentioned: W. T. Macoun, Central Experimental Farm, Ottawa; J. Hay, Lachute, Quebec; Harvey Mitchell, of the Dominion Department of Agriculture; R. Robertson, Nappan, N. S.; S. J. Moore, Truro; Seth Jones, Sussex, N. B.; F. Johnson, Bridgetown; F. L. Fuller, Truro; P. J. Shaw, Truro; E. S. Archibald, Truro; J. P. Landry, Truro; S. A. Logan, Amherst Point; J. R. Starr, Port Williams; Robert Starr, Wolfville, together with other local men. In every instance, the directors report satisfaction, not only with the work of the judges, but also with the fact that the presence of outside disinterested judges has proven the means of reducing local jealousies to a minimum.

We hear considerable discussion as to the relation of these local fairs to the provincial exhibitions. Some claim that they are detracting from the support usually acorded the Provincial exhibition. Others claim that they should take the place of the Provincial exhibition. Our own view, and we think it is a sound one, is that each have their place and each should complement the other. The local fair appeals to the great mass of exhibitors; the larger Provincial fair, is the final court of appeal and should represent not merely the best of one locality, but the best the province affords. It is significent that those countries which have the largest and most successful provincial or state fairs also have the largest number of successfully conducted local fairs. We believe that the ultimate outcome of this movement for holding local exhibitions will be to strengthen the provincial exhibition and that the general policy of well conducted local and provincial exhibitions will lead to an improvement in the character of the products of the field, the garden and the stable which the province greatly needs.

Some local exhibitions have already selected their dates for their exhibition of 1910 and it looks now as if the fall of 1910 would witness a still larger number of local exhibitions, each with a better patronage than the fall of 1909.

S. P. Goudey,

the hustling Secretary of the Yarmouth Co. Farmers Association, Yarmouth, N.S. Mr. Goudey is offering to sell seeds at carload prices to agricultural societies. We have known Mr. Goudey for several years and feel confident that his 20 years' experience in supplying the agricultural societies of Yarmouth and adjoining counties with first-class seeds will be advantageous to any other agricultural societies who may place their orders in his hands. See his ads. on other pages of this issue.

The County Exhibitions.

The series of fall fairs held by many of our progressive Maritime Counties is now over. Lack of space prevents giving a full report of the various fairs in these columns. Our representatives, who visited the exhibitions held by the respective counties, are loud in their praise of the evidences of progress in live stock breeding and in the raising of agricultural products in the various sections of the Maritime Provinces. Some of the counties held fairs covering a period of three days, other counties held two day fairs and again some others held only a one day fair. Some of the departments at the county fairs equalled and in many cases excelled the showing made in the same departments at the provincial fairs.

We have before us copies of the awards made by the judges at the respective exhibitions and we regret that lack of space prevents us from giving to our readers a full list of the winners. Winnings at county fairs are, however, only of local interest and undoubtedly the local papers have published the list of winners in their respective territories. We are pleased to note that the progress that is being made by the exhibitors at the county fairs is inducing them, one by one, to come forward and combat in the battle royal for the prizes offered at the provincial and inter-provincial fairs. In this way the county fairs act as feeders to the larger fairs.

There was a greater number of county fairs this year than in any previous year. Counties that did not hold a fair for periods ranging from five to twenty five or more years made very creditable showings. We trust that the efforts made in 1909 will be redoubled in 1910, that our farmers will prepare good and early and come forward ready to show the agricultural possibilities of their respective districts.

A Talk on Oats

A grain of oats is made up of two main parts: the outside or hull, and the inside or kernel. Another name commonly applied to the kernel is the meat. It is in the kernel that we are mainly interested, because this is the nourishing part of the grain. The chief use of the hull is to protect the tiny oat plant within, and to preserve the stored-up food material for its future use.

As a food for stock, and as an article of human diet, oats take a high rank. Since the value of the grain depends so much upon the part which is of little use for food, consumers of oats in any form whatever should be interested in the relationship existing between the hull and the meat.

The oat grain is always grown for its meat; the hull is generally regarded as a necessary evil by the stockman and the miller. The range of hull in oats is from 20 to 48 per cent., 30 per cent is the average. Oats have the largest percentage of hull to kernel of any of our grains. Barley comes next with an average of 15 per cent.

The percentage of hull to meat depends largely upon the variety. For example the Joanette oat generally averages 23 pounds of hull from every hundred pounds of grain; while the Banner gives thirty pounds of hull, and the Fifty Pound Black 40 pounds. This simply means that by purchasing one hundred pounds of Joanette oats the buyer gets seventeen pounds more of the most valuable part of the oat grain than he would get were he to purchase the same weight of Fifty Pound Black—a gain surely worth consideration.

This difference is the proportion of the two main parts of the oat grain accounts for the fact, observed by all feeders, that horses will often do as well on three pecks of one variety as on four pecks of another. As a rule, grains high in hull have a more tough and indigestible covering than those low in hull, with the result that the nutriment they do possess is not so fully extracted by the animals.

The relative proportion of hull and meat in any oat can be determined roughly by removing the hull from fifteen or twenty representative grains and then comparing the amount of hull with the meat. Varieties, also may be compared in this way.

Aside from the question of variety the two principal factors which influence the proportion of the parts under consideration are: the time at which the oats were sown, and the time they are harvested. Late-sown oats are usually high in hull, and the same holds true of oats cut before maturity. Last year a plot of oats cut in the milk stage ran 48 per cent. of hull, while an adjoining plot of the same variety which had been handled in exactly the same way, excepting that it had been allowed to ripen perfectly before cutting, ran only 28 per cent. Any unfavorable condition of soil or season which tends to stunt the plant or retard the proper filling of the grain will also cause a higher per cent. of hull.

From the foregoing it may appear that the ideal oat would be hull-less one. But we have noted that the hull serves to protect the future plant and its supply of food material. It is claimed also that there is a relationship between percentage of hull and strength of straw—a low percentage of hull generally going with a fine, weak straw. This contention seems to be borne out in the case of the Joanette, but the heavy-hulled Fifty Pound Black is found to have straw which is soft and brittle. We may conclude that the most desirable oat, other things being equal is the one with the lowest percentage of hull.—L. S. KLINCK. McDonald College, St. Anne DeBellevue.

Balanced Rations.

In reading current daily literature two such glaring misprints have been observed that the average farmer is apt to be seriously misled unless considering carefelly what he is reading. For instance, one daily paper solemnly announces that "for daily maintenance the cow needs per 1,000 lbs. live weight, seven pounds of protein." Another current issue of a different paper prints "for daily maintenance a cow needs .01 lb. fat."

To put the matter right, let it be clearly stated that the accepted standards give the food of maintenance required daily by a 1,000 lb. cow as 0.7 of a lb. of protein, 7 lbs. of carbohydrates, and 0.1 lb. of fat. The total digestible nutrients required, assuming that a 1,000lb. cow is giving 20 pounds of milk, testing 3.0 per cent. fat, would be 1.5 lbs. protein, 10.6 lbs. of carbohydrates, 0.38 lbs. of fat.—C. F. W.

Soap Washes

Dissolve one pound of whale oil soap n four gallons of warm water for black or brown aphis, and one pound in six gallons of green aphis.

Another remedy for aphis is the following: Boil 8 pounds of quassia chips in 8 gallons of water for an hour, dissolve 7 pounds of whale oil soap in hot water; strain the quassia decoction and mix with the soap solution; then dilute to make 100 gallons. Spray forcibly while hot; this will kill the plant-lice and not injure the plants.

Cook's Carbolic Soap Wash.—Hard soap, one pound, or soft soap, 1 quart; crude carbolic acid, 1 pint; water (boiling), 1 gallon. Dissolve the soap in the boiling water: while still hot add the carbolic acid; emulsify thoroughly. This is the stock solution. For use, dilute with 30 to 50 times its bulk of water. Very effective against root maggots of cabbage, raddish and onion.

Information Wanted re Goat Keeping.

S. S. "Prince Arthur,"
Long Wharf, Boston,
Oct. 6th, 09.

TO THE DEPT. OF AGRICULTURE,
Truro, N. S.

GENTLEMEN:—Be good enough to give me whatever information you have in relation to the raising of goats—location and climatic conditions most suitable (chiefly in connection with Nova Scotia) and marketing conditions for the hair.

Yours gratefully,
JOSEPH WARD.

The foregoing letter has been handed to us by Prof. Cumming, of the Truro Agricultural College, who wishes to get in touch with men who have had some practical experience with the rearing and handling of goats. Will any one of our readers, who has had this experience or who knows parties who are conversant with goat-keeping write to Prof. Cumming, Truro, N. S.

It will pay farmers to look into this Seed proposition of S. P. GOUDEY'S. He has supplied thousands of satisfied customers for years and now offers his services to you. Any Farmers' Association or Agricultural Society can secure a supply for their members for spring of 1910, if they will ask for particulars. He imports by the carload and sells on 5% commission. S. P. GOUDEY, Yarmouth N. S.

Twenty-five cents is the Price of Peace.

The terrible itching and smarting, incident to certain skin diseases, is almost instantly allayed by applying Chamberlain's Salve. Price, 25 cents. For sale by all dealers.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

Subscription Price $1.00 per year. **When paid in advance** 80 cts. Persons taking advantage of the 80 cent rate when subscribing are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definite order for dis. continuance is given.

The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser be said :—**"I saw your adv. in the MARITIME FARMER."**

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The Maritime Farmer,
or R. D. ROBINSON PUBLISHERS, Ltd.
SUSSEX, N. B.

Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 7500 Copies. Every one going to a bona fide subscriber.

OCTOBER 26, 1909.

Dates of Issue.

November.....9-23
December.....7-21

SOME OF THE BENEFITS OF THE WOMEN'S INSTITUTE TO FARMER'S WIVES.

Mrs. L. L. Shannon, Brighton, Ont., writing in Farm and Dairy says :

"The Women's Institute is destined to work a change in the condition of Canadian women and Canadian homes. It can reach all classes, place, creed or age. The topics discussed are of interest to all, being chiefly "the improvement of the home." Broadly speaking, the work of the Institute includes anything which tends to the betterment of home conditions and making life more attractive in the rural districts. On this very account it does a work that church organization cannot do. A church organization embraces those whose religious views and social outlook are in the same channel. A social club comprises those whose tastes are congenial but the Women's Institute is the broadest form of club life for women, combining so many varied elements from so many classes of life.

"Our farmers' wives aside from their attendance to church get out none too often. The Women's Institute is a benefit to them, they get new thoughts, new ideas which greatly widen their spheres of usefulness. In this noble Canada of ours, influential men are bending their energies to nation building and the general prosperity of our fair Dominion. Is not this the time for Institute workers to bend their energies to character building? Mr. Gladstone said, "the home is the foundation of the state," then surely the home and the nation are one.

"The foundation for good in our children is laid in the home, and the Institute is for making efficient women in the home. It has been said that "the hand that rocks the cradle is the hand that rules the world." The careless ones are learning that motherhood should be revered and that parentage is a sacred duty. All the world is realizing that the home means much to the nation.

"In our homes, we should have a good living and no matter how straitened the circumstances, the physical welfare of the family should be looked after, and the mental and spiritual is sure to follow. This is where the benefits of the Institute comes in, with its lessons on "Care of Babies," Food Value and Economical Dinners."

"The home to be preserved must be cared for. The girl of to-day is the matron of to-morrow, so let us look well to the spiritual development of our boys and girls. The lady delegates to the Women's Institute meetings little realize how much good they are doing, visiting different institutions and speaking to all classes of women. I heard a lady remark after listening to one of the speakers at an afternoon meeting "Had I heard talk like that years ago, it would have made a difference in my life." So our daughters have the benefits in training, that the Institute gives, that we who are older have missed. The moral tone of the whole community can be raised by the combined efforts of the Women's Institute.

"In our Institute there is growing interest, not only changing recipes, but studying food values of the different foods prepared. We have had some meetings of particular interest. One a lesson on "Fruits, tropical and home grown." We gave their origin, the acids they contained, their medical value if any, and their helps in our diet. Slips of paper were prepared and handed around before the meeting as all had a part in the afternoon program.

"There has been a lack of young ladies in some of the Institutes. I am glad to say in our home Institute we have a large number of young ladies. They have had full charge of the two meetings; the one a full course dinner. The menu was given (2) laying of the tables and decorations, (3) the recipes given and explained by the young ladies who had that part of the dinner in charge. It was excellent. The other meeting was a literary one. The program was given entirely by the young people, which goes to show that the young ladies of Brighton Institute are more than ornaments.

"Not only are farmers' wives benefitted, but town ladies may learn from Women's Institutes. Hear what a lawyer's wife in a large town says. I have had to keep a housekeeper as I have had so little experience along the line of housekeeping. The benefits of the Institute are such that I derived sufficient information that I am now doing practically all my own housekeeping and I give great praise to the local branch of the Women's Institute. Another town lady, a member of our own Institute, says she never attended a meeting she did not learn something. Another great benefit which comes from the Institute, is the friendly feeling which exists among women, some who had only a bowing acquaintance, are now warm friends. The Institute has brought them together and they have grown to know each other. Another benefit is the reviving of talents which have been buried for years. Now the women write papers on the topics of the day, or provide some part of the musical line of the program.

"We must not forget the "Question Drawer," for the timid ones when they have a chance to write that which they would not say, and the social side after the program."

AGRICULTURE, A SCHOOL SUBJECT.

There are two good reasons for considering agriculture a good subject to teach in school, viz, that it affords in a preminent way (1) a wide field for accurate, interesting, and uplifting knowledge, and (2) a wide field for doing. Agriculture is a cultural subject because it is "concerned with the highest truths that the mind can consider, namely, the laws of life, of growth, of heredity, of adaptation, of selection, of environment." It is also a practical subject because of the direct application of its principles to life and because it shows the relation between cause and effect.

THE POWER OF RESPONSIBILITY.

Responsibility is a great power developer. Where there is responsibility there is growth. People who are never thrust into responsible positions never develop their real strength. This is one reason why it is so rare to find very strong men and women among those who have spent their lives in subordinate positions, in the service of others. They go through life comparative weaklings because their powers have never been tested or developed by having great responsibility thrust upon them. The thinking has been done for them. They have simply carried out somebody else's programme. They have never learned to stand alone, to think for themselves, to act independently. Because they have never been obliged to plan for themselves, they have never developed the best thing in them—their power of originality, inventiveness, initiative, independency, self reliance, their possible grit and stamina. The power to create, to make combinations, to meet emergencies, the power which comes from continuous marshaling of one's forces to meet difficult situations, to adjust means to ends, that stamina or power which makes one equal to the great crisis in the life of a nation, is only developed by years of practical training under great responsibility.

There is nothing more misleading than the philosophy that if there is anything in a youth it will come out. It may come out and it may not. It depends largely upon circumstances, upon the presence or absence of an ambition arousing, a grit awakening enviroment. The greatest ability is not always accompanied by the greatest confidence or the greatert ambition.

DISTRICT SOCIABILITY.

In visiting about the country we have often been impressed with the utter dreariness of the winter season in some communities. Yet this condition does not universally obtain. In some places the frozen-up period is punctuated with district debates, literary society gatherings, occasional lectures and musical festivals. These all make for greater sociability, draw out the young people, and develop mentality. And they are all wholly under the control of the community itself. In every district where there is a school-house there is a centre for the social and and intellectual life, and it would be well if our school buildings were more generally used for gatherings such as we have suggested. The school is supposed to stand for education, and among the children it really does so. But the elder folk require mental and emotional exercises; infact they must have it; and this is only another phase of the educational problem. Is it not proper that suitable provision should be made in such legitimate and natural ways as the best ingenuity and good sense of the community can suggest? It is a great thing for any district to possess one or two well-balanced and fully equipt social leaders, but there is no place so destitute of talent that it cannot, even in spite of theold proverb to the contrary, lift itself by its own bootstraps.

WE MUST HAVE NAMES.

The recent receipt of letters from correspondents who did not sign their names causes us again to state our rule, which is that no notice will be taken of unsigned communications. We are not averse to answer enquiries and publishing expressions of opinion from bona-fide correspondents who wish to use only some selected nom-de-plume, but as a guarantee of good faith the real names and addresses of the senders must be furnished to this office.

EDITORIAL NOTES.

A good motto for every farmer would be,—"A place for everything and everything in its place." This would apply to everything on the farm and every part of the farm operations. It would include, among other things, the machine shed, the tool house, the crops and their rotation, the dairy, orchard, garden, etc.

Nature and Source of Water.

Chemically, water is a compound of two gaseous elements, hydrogen and oxygen with the formula (H2O).

Physically it is a colorless, transparent, tasteless liquid. While both its competent elements exist free in nature, the presence of free oxygen being an essential condition of life, water is itself one of the most abundant substances in nature. Practically three-fourths of the earth's surface is covered with water. Its depth is often several miles. The atmosphere is always more or less charged and frequently saturated with its vapor.

Land areas all carry lakes and rivers. The earth is moist and often wet with the rain that descends upon it. There is, perhaps, no land area where standing water does not exist at a greater or less depth below the surface, and generally within a few feet.

It is constantly evaporating from the surface of land and sea, carried off in the air, condensing into the clouds, precipitating as rain or snow, sink into the earth, emerging again in springs, forming in rills, uniting into streams which converge into rivers and flow again into the sea. Thus the cycle is completed and repeated from the dawn of time until eternity.

WATER CAPACITY OF SOILS.

The maximum capacity of soils for water is measured by the amount of pore space between the soil grains. It has been computed that this ranges between 35 and 63 per cent. of the volume. Coarse sands have the least and fine clays the greatest aggregate space between the grains of a given cubic amount. About 40 to 45% of good loam is occupied by air.

Onder ordinary soil conditions the force of gravity removes the hydrostatic, or standing, water to lower levels by drainage, leaving only the capillary water which is held by the force of adhension or surface tension. It is the capacity of soils for capillary water, that is of real agricultural significance. Here again the capacity is in inverse ratio to the size of the grains.

It has been computed that the soil grains present the following amounts of surface per cubic foot :

	Square feet
Coarse sand	3.000
Sandy loam	37.000
Loam	45.000
Clay loam	60.000
Heavy clay	90.000
Finest clay	175.000

In as much as the capillary water is held in the form of a film around each soil grain, the amount of surface presented directly determines the capacity for water, under perfect conditions.

The capacity of water is greatest in humus soils and least in sandy soils. It is greatest in the surface foot and gradually diminishes downwards. The greater the distance to the water table or standing water, the less the capillary power.

A rough estimate of the capacity of soils to hold water under average conditions in the first four feet in depth, might be 25 to 30 per cent of its volume, equal to from 12 to 15 inches of rainfall. In many Montana soils it is probable that the percentage capacity would remain very little diminished to much greater depth on account of the absence of subsoil and hardpan.

Movements of water in soils are two. The first a downward movement, occasioned by the force of gravity, tends to rid the soil of superfluous water by drainage, and while necessary in humid climates it is the occasion of some loss of soluble plant food. In the arid regions, without irrigation, this movement may be disregarded.

The second or capillary movement is caused by the physical force of surface tension or capillarity, where each drop attracts and draws to itself other drops in the zone of its influence. It is the force which causes oil to rise in the wick, or water to run over the edge of a basin through a wet towel. Practically this movement is upwards in soils because of the attraction of the water which is being transpired by plants or dispersed in the air by evaporation. Water is constantly drawn upwards to replace that which has gone off in vapor. Capillarity is most active when the soil is moist and on a perfectly dry surface, rains will often run off without wetting the soil to any great depth.—Montana Farmer's Bulletin No. 1.

Vitality of Weed Seeds in Manure.

The question sometimes arises as to how great a measure of vatility will be shown by weed seeds after they have passed through the digestive tract of an animal. E. I. Oswald, of the Maryland Station, undertook to obtain more definite information on this point, and also on the effect of the fermentation of manure handled in different ways. His feeding stuffs, included about fifty of the worst weeds found in Maryland.

In experiments in which the manure remained (1) for six months in a barnyard heap, and (2) for a short while in piles, it was found that in the first case there was no danger and in the second case little danger of distributing live weed seeds. In the experiments in which the weeds were fed to yearling steers and the manure handled in various ways it was found that—

(1) Where the manure was hauled directly from the stable as a top dressing an average of only 12.8 per cent. of the seed fed to animals germinated.

(2) Where the manure was hauled directly from the stable upon the land and plowed under 2.3 per cent. of the seeds fed to animals came up.

(3) Where the droppings remained on the pasture fields unadulterated as they fell an average of only 3.1 per cent of the seeds fed to animals germinated.

The result sindicate that in general it is safe to assume that the vitality of weed seeds is destroyed in wellrotted manure, but that many pass unharmed through the digestive tracts of animals and may be carried to the land in the manure if not well rotted before use.

Prepare the Pump for Winter.

"The leak pin should be taken out, and, if the well is less than 16 feet deep, a second platform should be put in about four feet below the surface and made air tight. This can be done by covering it with a couple of layers of heavy building paper or some old bags; or clean snow is very good for the purpose, if there is any at the time. The upper cover ought to be made close and tight, and if the crib is above the ground, it should be banked up even with the top of the well.

"Many persous never think about the pump until it is frozen up. It is a friend you will need every day through the winter, and you ought to see that it is in good repair and taken care of before the winter starts; and it can be done much better and cheaper now than when it is colder. This work should be done not later than Nov. 5th.

Croup is most prevalent during the dry cold weather of the early winter months. Parents of young children should be prepared for it. All that is needed is a bottle of Chamberlain's Cough Remedy. Many mothers are never without it in their homes and it has never disappointed them. Sold by all dealers.

Halifax Prize List.

HORSES.

CLASS 1—THOROUGHBREDS.

Stallion, 4 years old and upwards, 1, Geo. Haley, Windsor, Haphazard; 2, H. C. Jewett, Fredericton, Cyclist.

Stallion, 1 year old, 1, Wm. Robinson, Halifax, Lucifer II.

Brood mare, with foal by her side, Wm. Robinson, Cotton; 3, Wm. Robinson, Silence.

Foal, of 1909, 1, Wm. Robinson, 2, Wm. Robinson.

Stallion any age, diploma, Geo. Haley.

Brood mare any age, diploma, Wm. Robinson, Cotton.

CLASS 2.—STANDARD BRED HORSES.

Stallion, 4 years old and upwards, 1, Frank Boutilier, Frank Power; 2, Dr. M. Ronan, Maid's King; 3, Thos. Munro.

Stallion, 3 years old, 1, Dr. Saunders, Rampart II; 2, S. A. Rockford, Baron Ajalon; 3, Dodd Dwyer, King Dodd's.

Stallion, 2 years old, 1, Phaire & Allen, Kinkrilla; 2, S. A. Bowser, Brookside.

Stallion, 1 year old, 1, DeWolfe McLean, Hopewell Boy; 2, Mrs. W. H Musgrave.

Brood mare with foal by her side, 1, D. R. Sutherland, Dina Hartshine; 2, Frank Boutilier, Jessie Rampart; 3, T. B. Messenger, Lady Ferron.

Filly, 4 years old and upwards, 1, G. A. Wallace, Grace Abbott; 2, G. A. Sellers, Lady Brazilian; 3, H. C. Jewett, Bessie Pardner.

Filly, 2 years old, 1, H. K. McLean, Miss Woodburn; 2, T. B. Messenger, E. D. M.

Filly, 1 year old, 1, I. L. Hartlen, Cherry Blossom.

Foal of 1909, 1, D. R. Sutherland; 2, T. B. Messenger, 3, I. L. Hartlen.

Brood mare, any age, diploma, D. R. Sutherland.

CLASS 3.—ROADSTER HORSES.

Brood mare, with foal by her side, 1, A. H. Hilton; 2, Robert Settle Jr; 3, A. G. Drysdale.

Filly or gelding, 3 years old, 1, A. Hornstein.

Filly or gelding, 2 years old, 1, E. J. McKenna.

Filly or gelding, 1 year old, 1, G. A. Sellars; 2, P. S. Purcell.

Foal of 1909, 1, Robert Settle Jr., 2, A. H. Hilton; 3, James Adams.

Pair matched roadsters in harness, 15 hands and over, 1, H. A. Corbett, Daisy Dewitt and Anita, 2, James Blake, Clay and Flora.

Single horse in harness 15 hands and over, 1, D. J. Buckley; 2, James Adams; 3, Alex. Woodworth.

CLASS 4.—CARRIAGE HORSES.

Brood mare with foal by her side, 1, R. H. Snowball, Jubilee Beauty; 2, Geo. Haley.

Foal of 1909, 1, R. A. Snowball; 2, Geo. Hayley.

Pair of matched carriage horses in harness, 15½ hands and over, 1, R. H. Melzter, 2, I. L. Hartlen.

Single horse in harness, 15½ hands high and over, 1, R. J. Steele; 2, John Redden; 3, R. H. Melzter.

Best horse, any age, diploma, 1, R. A. Snowball.

CLASS 5.—PONIES.

Stallion, over 12 and not exceeding 14 hands 1, Patrick Dacey, Halifax.

Mare or gelding, over 13 and not exceeding 14½ hands, 1, Geo. A. Thompson.

Mare or gelding, under 12 hands, 1, Mary Hooper, Truro.

Shetland stallion, not exceeding 10½ hands, 1, Nelson B. Smith, Halifax.

Shetland mare or gelding, not exceeding 10½ hands, 1, Etta Fuller, Truro, N. S.; 2, Donald McCurdy, Halifax.

CLASS 6—GENERAL PURPOSE HORSES.

Mare or gelding, 4 years old and upwards, not exceeding 1,350 pounds, 1, R. J. Steele, Charlottetown; 2, M. M. Thomyson, Shubenacadie; 3, D. R. Sutherland, Pictou.

Mare or gelding, 3 years old, not exceeding 1,200 pounds, 1, W. R. Newcombe, Halifax; 3, Geo. Haley, Windsor; 3, Johnson Cameron, Stellarton.

Filly or gelding, 2 years old, not exceeding 1,000 pounds, 3, W. R. Newcombe.

Filly or gelding, 1 year old, 1, John W. Richard, Dartmouth.

Brood Mare with foal by her side, 1, John McDonald & Sons; 2, A. J. Keddy, Dartmouth.

Foal of 1909, 1, C R. H. Starr & Son; 2, John McDonald & Sons; 3, A. J. Keddy, Dartmouth.

Matched team, geldings or mares, shown in harness, under 2,700 pounds, 1, W. W. Black, Amherst. Baby and Dora; 2, R. Chisholm, Lr Canard.

CLASS 7.—HEAVY DRAUGHT HORSES.

Mare or gelding, 4 years old and upwards, over 1,350 pounds, 1, R. R. Innis; 2, Johnson Cameron; 3, J. M. McGrath & Co.

Mare or gelding, 3 years old and over, 1,200 pounds, 1, Geo. B. O'Brien; 2, Johnson Cameron.

Filly or gelding, 2 years old, over 1,000 pounds 1, Wm. Sharp; 2, Logan Bros.

Filly or gelding, 1 year old, 1, Wm. Sharp.

Brood mare with foal by her side, 1, Wm. Sharp; 2, Davis Densmore.

Foal of 1909, Wm. 1 Sharp; 2, Davis Densmore.

Matched team, over 2,700 pounds, 1, Geo. B. O'Brien; 2, J. M. McGrath & Co.

Mare and 3 of her, progeny, diploma, Wm. Sharp.

CLASS 8.—HACKNEY HORSES.

Stallion 4 years old and upwards, 1, Roper Bros., Charlottetown, "Fashioner;" 2, Geo. R. Chipman, Grand Pre, Sensation.

Stallion, 2 years old, 1, R. A. Snowball, Model Performer, 2, C. A. Webster, Yarmouth, Sunburn.

Brood mare with foal by her side, 1, R. A. Snowball, Langton Lily.

Filly, 4 years old and upwards, 1, C. A. Webster, Firebrand.

Filly, 3 years old, 1, C. A. Webster, Shiny Shoe; 2, C. A. Webster, Good Friday; 3, W. W. Black, Miss Violet.

Foal of 1909, 1, R. A. Snowball.

Stallion, any age, diploma, R. A. Snowball, Model Performer.

Mare, any age, diploma, R. A. Snowball, Langton Lily.

CLASS 10.—COACH HORSES.

Stallion, 4 years old and upwards, 1, H. C. Jewett, Onyx.

Stallion, any age, diploma, H. C. Jewett, Onyx.

CLASS 11.—CLYDESDALE HORSES.

Stallion, 4 years old and upwards, 1, P. C. Brown, Lord Delmaney; 2, H. C. Jewett, Sorbie Boy; 3, C R. H. Starr & Son, Baron Primrose.

Stallion, 3 years old, 1, W. W. Black, Saxon Prince; 2, Geo. B. O'Brien, Norseman.

Stallion, 2 years old, 1, R. A. Snowball, Baron Belgradon; 2, W. W. Black, Amherst Lad.

Stallion, 1 year old, 1, C. R. H. Starr & Son; 2, Donald McIntyre; 3, H. C. Jewett.

Brood mare, with foal by her side, 1, Logan Bros., Soubrette; 2, C. R. H. Starr & Son; 2, Logan Bros., Pink Rose.

Filly, 4 years old and upwards, 1, R. A. Snowball, May Lothian.

Filly, 3 years old, 1, C. R. H. Starr & Son; 2, R A. Snowball, Rosie Miller.

Filly, 2 years old, 1, W. W. Black, Bessie.

Filly, 1 year old, 1, Logan Bros., Baron's Fancy; 2, Logan Bros., Princess Msy.

Foal of 1909 1, C, H. R, Starr & Son; 2, Logan Bros., Soubrette II; 3, Logan Bros., Pink Rose.

Stallion, any age, diploma, P. C, Brown.

Mare, any age, diploma, Logan Bros.

Stallion and 3 of his get, diploma, C, H. R, Starr & Son.

Silver cup, offered by the Dominion Clydesdale Association, for the best stallion, any age, recorded in the Dominion Clydesdale Stud Book. Cup must be won three times by the same owner before it becomes his property. Cup, P. C. Brown.

Foal of 1909, Chas. Symes.

CLASS 14.—PERCHERON HORSES.

Stallion, 4 years old and upwards, 1, Frank Ellis, Aubin.

Brood mare, with foal by her side, 1, Chas. Symes.

BEEF CATTLE.

CLASS 16.—SHORTHORNS.

Bull, 3 years old and upwards, 1, R. A. Snowball, Major Lewis.

Bull, 2 years old, 1, C. A. Archibald, Merry Jock.

Bull, senior yearling, 1, R. A. Snowball, Dun Robin Sailor.

Bull, junior yearling, 1, C. A. Archipald, Huskie II.

Bull, senior calf, 1 and 2, R. A. Snowball, Chatham Laddie and Chatham Lad.

Bull, junior calf, 1, C. A. Archibald, Wood King; 2, R. A. Snowball, Major of Meadowville.

Cow, 4 years old and upwards, in milk or calf, 1 and 2. C. A. Archibald, Lady Roan and Merry Maid IV.

Cow, 3 years old, in milk or calf, 1, R. A. Snowball, White Lady.

Heifer, 2 years old, 1 and 3, C. A. Archibald, Katrina of Bellevue and Rosabella of Bellevue XIV; 2, R. A. Snowball, Mina Snowdrop.

Heifer, senior yearling, 1, C. A Archibald, Heronia; 2, R. A. Snowball, Chatham Lassie.

Heifer, junior yearling, 1 and 2, C. A. Archibald, Merry Maid V and Lady Woodland; 3, R. A. Snowball, Lady of the Snow.

Heifer, senior calf, 1, C.A. Archibald, Mermaid; 2 and 3, R. A. Snowball, Mina Snowball and Queen of Meadowbrook.

Heifer, junior calf, 1 and 2, C. A. Archibald, Jilt and Merry Maid VI.

Champion bull, diploma, R. A. Snowball, Major Lewis.

Champion female, diploma, C. A. Archibald.

Best 3 animals, get of one bull, 1 and 2, C. A. Archibald.

Best 2 animals, progeny of one cow, 1 and 2, C. A. Archibald.

Best breeders' herd, to consist of one bull, under 2 years; 2 heifers, 1 year old and under 2 years; 2 heifers, under 1 year, all bred and owned by exhibitor, 1 and 2, C. A. Archibald; 3, R. A. Snowball.

Best graded herd, to consist of 1 bull, 2 years old and over; cow, 3 years old and over; heifer, 2 years old and under 3 years; heifer, 1 year old and under 2 years, and heifer calf, under 1 year, 1, C. A. Archibald; 2, R. A. Snowball.

CLASS 17.—HEREFORDS.

Bull, 3 years old and upwards, 1, W. W. Black.
Bull, 2 years old, 1, W. W. Black.
Bull, senior yearling, 1, W. W. Black.
Bull, senior calf, 1, W. W. Black.
Bull, junior calf, 1, W. W. Black.
Cow, 4 years old and upwards, in milk or calf, 1, W. W. Black.
Cow, 3 years old, in milk or calf, 1, W. W Black.
Heifer, 2 years old, 1, W. W. Black.
Heifer, senior yearling, 1, W. W. Black.
Heifer, junior yearling, 1, W. W. Black.
Heifer, senior calf, 1, W. W. Black.
Heifer, junior calf, 1, W. W. Black.
Champion bull, diploma, W. W. Black.
Champion female, diploma, W. W. Black.
Bull and 3 of his get, diploma, W. W. Black.
Cow and 2 of her offspring, diploma, W. W. Black.
Aged herd, 1, W. W. Black.
Breeder's young herd, 1, W. W Black.

CLASS 18—DEVONS.

Bull 3 years old and upwards, 1, Chas. G. Pinkney, Prairie King; 2, W. A. Pinkney, Melbourne King.

Bull two years old, 1, Chas. G. Pinkney, Royal Chief

Bull, senior yearling, 1, W. A. Pinkney, Shadelard Xergent.

Bull, junior calf, 1, Chas. G. Pinkney, Captain Kidd; 2, W. A. Pinkney, Melbourne Prince.

Cow, 4 years old and upwards, in milk or calf, 1 and 2. W. A. Pinkney, Grace S., Dawn of Springdale; 3, Chas. G. Pinkney, Florence Nightingale.

Cow, 3 years old in milk or calf, 1, W. A. Pinkney, Florence A.; 2, Chas. G. Pinkney, Ruby.

Heifer, 2 years old, 1, Chas. G. Pinkney, Lady Roberts; 2, W. A. Pinkney, Melbourne Belle.

Heifer, senior yearling, 1 and 2, W. A. Pinkney, Buttercup, Fanny; 3, Chas. G. Pinkney, Princess Louise.

Heifer, junior yearling, 1 and 2, W. A. Pinkney, Melbourne Queen, Melbourne Beauty; 3, Chas. G. Pinkney, Martha.

(Continued on page 37.)

How the Shenadoah Gets Her Cargo.

EDITOR MARITIME FARMER:—

The steamship Shenadoah of the Furness Line sailed from Halifax for London on Oct 1st, carrying 19000 barrels of apples. I have heard it said the growers and packers of apples would follow their fruit to market and see it opened they would learn some things of importance, many points of interest to one in the business can also be picked up on the dock at Halifax when one of the big apple boats is packing in cargo. There were some ten carloads of apples in the shed, and a score of stevedores were unloading cars. The men were using every care in handling, quite as well as in the average packing house. Some things they could not control; the big cars piled five tiers high are hard to handle the men cannot reach the top barrel, so the next thing is to pull out the bottom and let them come down on the run. Here comes an Armoustrong Refrigerator car. with a low door and barrels piled above the door, two men with pinch bars tackle it, and pry out a barrel from the bottom, it is rough work on Gravenskeins, but the only way. Here is a car loaded at Cambridge Station, the last freight on that car seemed to have been molasses or some other sticky substance, the car had not been properly cleaned before using and a dozen barrels were damped with black stuff, contaminating every other with which they came in contact. A few boxes came out of one car from the Walkerville Fruit Co. Fine colored Gravensteins could be seen through the openings in the boxes. This nice lot was used in "chinking" up cargo, the stevedores tucking in a box anywhere a barrel would not go, and I am afraid they will come out in bad shape in London. Before box packing becomes general it will be necessary to have them properly carried to market, and the only way to carry them is to have a part of the deck where they can be properly tiered up and not mixed in with barrels.

Two inspectors, Fitch and Sangster, were on duty, busy looking after the shipment. Their duties are manifold and there is plenty to keep them busy. Six barrels are loaded in rope slings and a donkey engine hoists from the dock and lowers into the hold. Once the engine was starting when the Inspector called a halt; the head was started from a barrel, inspection showed four nails supposed to be driven in the piece of head that was started but there out of four had gone under the head not into it. A few barrels from each car are opened by the Inspectors. If the first barrel of a lot is good that usually satisfies them, if bad others are opened. Inspector Fitch seems to know by instinct where the poor stuff is. He scents it from afar and approaches with his hatchet. One barrel is opened, showing miserable, early picked gravensetins, no color, badly spotted, greasy. An English Commission man standing by remarks, "My word, vinegar apples." The inspector rolls out five barrels all he can find of that mark, they are all opened and seemingly each is worse than the other, out comes the red ink and "Falsely marked" goes in a dozen places on every barrel. The Report to the Department reads, "Gravensteins No. 1 and 2, 5 barrels marked A. D., small spotted, washy, bad lot, recommend for prosecution." This lot certainly deserved all it got as the apples were worthless for anything but vinegar, and several other lots that escaped the fatal brand will not give any satisfaction to the buyer, and can only be sold on the reputation of some other lot. When well grown and carefully packed the Gravenstein is one of the finest apples of the world, if not it is amo. g the poorest. The Inspectors report all their doings to the Fruit Department at Ottawa, the condition of every lot inspected as well as anything wrong that comes under their notice. Here is a specimen page from their note book:—"Inspected 7 barrels Gravensteins, branded 5 barrels falsely marked, too small, no spot. No. 1 should be No. 2 and No. 2 should be No. 3." "Dirty car I. C. R. 8072 very dirty loaded at Cambridge for H. O." "Box apples, Wagner, Mark S. B. Chute, Berwick, fine fruit, poor box." "Box apples, A. S. Banks, Waterville, splendid fruit, well packed, boxes not fit, ends split."

"Gravensteins No. 1 fairly good, no address." "Lot marked xxx instead of No. 1 wrote shipper."

"Car Ribstons No's one, two and three, fair, inspected six," and so on indefinitely. The Shenadoah should have sailed five days previously but was held back waiting for cargo, this is an abuse that is frequently practiced, and should not be allowed on subsidized boats.

S. C. P.

The Nova Scotia Horticultural Exhibition.

The Animal Horticultnral Exhibition was this year held at Middleton. For six years this show has been held at various towns in the Annapolis Valley, and in every case a very creditable display has been made. This was the first attempt of the newly incorporated town of Middletown in the fair business and certainly the Committee of the Management may be congratulated on their success. The display of apples was very good indeed. Some varieties were above the average. Gravensteins, Kings and Nonpariels were very fine in size, color, and uniformity, showing great care in selection. In collections of commercial varieties competition was very keen, and all the prizes were won by a very small margin. Apples in boxes and barrels packed for market showed a distinct improvement over previous exhibitions. The methods of packing are yearly improving, and competition helps the packer by giving him an opportunity to see the ideas of others. Pears were displayed in great profusion, making a very large and fine exhibit. Plums, although somewhat out of season were brought out in a abundance, in fair condition. Peaches, grapes, quinces and fruits in glass, all added to the appearance of the display.

Mr. W. G. Macoun of Ottawa was the acting judge, and examined the whole Exhibit with great care.

Mr. F. G. Earl the B. C. expert box-packer was the center of an interested group of practical fruit growers about all the time during the three days of the show.

Farm Weeds of Canada

We have recently received from the Seed Commissioner a copy of the revised edition of the "Farm Weeds of Canada." The first edition of this book was distributed free to public institutions, including rural schools.

The revised edition contains seventy-six plates of weeds and weed seeds, illustrated in their natural colour, and one hundred and eighty pages of text, It has been published to meet the demands from farmers and others who desire the book for their personal use. The unusual expense entailed in connection with its issue precludes it from those pulications of the Department that are printed for general distribution, free of charge.

The book is now available to the farmers of Canada (single copies only) at the office of the Superintendent of Stationery, Government Printing Bureau, Ottawa, for the nominal price of one dollar ($1). We hope that every one of our readers who are interested in agriculture will procure a copy of "Farm Weeds," thoroughly study its contents and lend willing assistance in keeping down the weed pests.

To successfully combat the weeds and keep them in check one must know the habits of growth of the particular weeds he is fighting. "Farm Weeds" contains the necessary information and should be in every Canadian Farmer's library. Send for one today, lest you forget.

Renovating Old Orchards.

There are some old orchards that have really outlived their usefulness except to be made into stove wood and back logs for the fireplace. There are a few old seedling apple orchards that bear poor fruit and are too old and feeble to be worth top grafting, writes Prof. H. E. Van Deman in Green's Fruit Grower. These are surely better in the woodpile than as orchard trees. Some of the trees of really good kinds, when they reach very old age, especially if they are in unfavorable soil or have been badly neglected, may as well be turned into fuel.

But there are many orchards, not only of the apple but of the pear, cherry and other fruits, that are well worth giving good treatment. If there are only a very few trees standing about that have fairly good health and are not very old, yet lack vigor to make them bear profitably, it would be surprising to see what good treatment will do for them.

One of the first things to do to an old fruit tree is to see that there are no borers in it. By a little close looking one can see where borers are at work. Both apple and peach trees have borers that work under the bark at the collar. With a hoe or garden trowel clear away the earth so that there is a good chance to see all the surface of the tree down to the roots. Borers usually make very plain marks and a little practice will enable one to see where they are. There is nothing surer. cheaper or better than digging out or killing the borers with a knife and wire probe. By a little dexterity they can be killed without seriously hurting the tree. The borers do enough harm, and the greatest care should be used in getting them out not to cut any more live tissue than is impossible to prevent. If tough paper is tied firmly about the collar of the tree before the earth is replaced, and having it extend several inches above the surface it will prevent, in some mearure, the laying of the eggs of the insects that hatch into borers.

Plowing or digging up the sod that usually grows in old orchards and about

Small Animals

are as effectually imprisoned as the larger ones, for we make "Maritime" Wire Fence with spaces too small for the little, wee piggies to squeeze through.

The absolute regularity of the weaving, the stiffness and springiness of the English high-carbon, hard-drawn steel wire, the remarkable gripping-strength of our lock, make "Maritime" Wire Fence a decidedly stronger fence—one that you ought to know more about.

Just write for our **Free Catalogue**

It contains many valuable pointers on fencing.

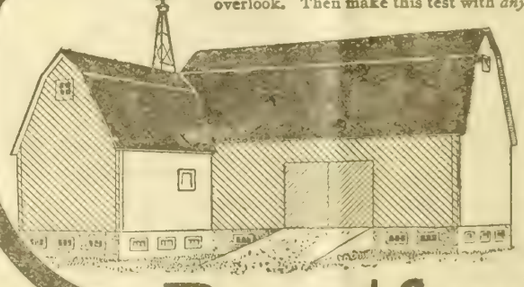
New Brunswick Wire Fence Co., Limited.

Moncton, New Brunswick.

MARITIME WIRE FENCE

Make this 60-Day Test of Brantford Roofing--then Test Any Other Make

Write us, or your dealer, for sample of *Brantford Asphalt Roofing*. Place it in water for sixty days. When you remove it, rip open with heavy knife, and you'll find insides—the vital part—perfectly dry, life-like, solid—as *before* test. Just think of severeness of this test! The result is evidence you *cannot* overlook. Then make this test with *any other* Roofing. You'll find the wood pulp—jute or cotton-cloth insides soaked—softened—lifeless. It *cannot* withstand severe weather, which is, at its worst, not *one-twentieth* so severe as *Brantford's Test*. Wood pulp is like paper. It *acts* like paper, when soaked—wilts away. How *could* you expect such a foundation to fight off Roofing Enemies! For resistance, it *must* depend upon animal fat, grease, or other refuse coating, themselves veritable mines of danger. They evaporate—wear off—expose shameful foundation to awaiting enemies. This coating cannot *prevent* penetration—protect defenceless insides from harm. But *Brantford Asphalt Roofing* Foundation is one sheet of evenly-condensed, long-fibred *pure Wool*, with life and body of its *own*. A *secret* mixture of *Asphalt* is *forced* into it, soaking every fibre. After mixture dries, foundation posseses resisting-power *no* amount of soaking or bending can effect.



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after special Water-proof Coating, into which Silica Sand is rolled under pressure, is applied, becomes a solid mass of resistance. It is weather, acid, alkali, frost, water-proof. *Cannot* freeze, crack or melt. Wonderfully pliable. Brantford has but one cost—first. Write for free Book and Samples.

Brantford Asphalt Roofing, No. 1, 2, 3.
Brantford Rubber Roofing, No. 1, 2, 3.
Brantford Crystal Roofing, one grade only, (heavy).
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THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Caustic Balsam

IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

REMOVES THE SORENESS--STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle **Caustic Balsam** did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

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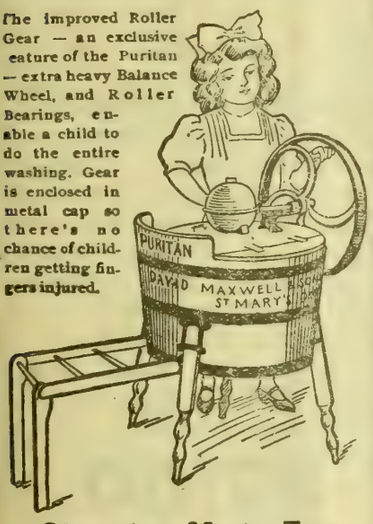

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scattered fruit trees will do a world of good to them. Thorough plowing and working of the soil during the growing period is the most important of all things that can be done to an old orchard. It should never be deep but shallow and frequent. Deep plowing will break many roots, but even this is better than to have no plowing. From three to four inches is deep enough to plough. This leaves the most of the roots undisturbed.

Next after plowing is the tillage. This should begin as early as possible and be continued throughout the entire growing season. This has a most beneficial effect and for several reasons.

The chief benefit from tillage, provided it is thorough, is from the preservation of soil moisture. As true as this is there are comparatively few who till the soil that clearly understand the fact. A hard surface allows the moisture to escape easily, while one that is loose does not. The doctrine of the dust mulch is getting to be understood and believed, but it is none too well known yet, nor can it ever be. It is one of the cardinal principles of farming, no matter of what kind, that lies at the bottom of all rural prosperity. Those who do not clearly understand the principle sometimes follow the practice of it, but if one understands it well he can the better know how to practice. Any tool that will pulverize the soil well is good, but some are better than others. If it is loose and easily worked the harrows and weeders will be very serviceable; but if the soil is stiff and apt to be cloddy they may be of little value, except when it has been first put in fine condition with other tools, and the cultivators and stouter stirring implements must be used. One thing should be kept constantly in mind; that the more frequently the soil is gone over the more easily it is done. Two cultivations will often cost less than one; because wider impements can be used to do the same or better work than narrow ones that are rarely used. The effect on the soil and trees that grow in it will be remarkable, and as to the resulting crop, it goes without saying that it will be correspondingly benefitted. The elements of plant food may be ever so abundant, but if they are not dissolved by the soil moisture, the roots of the trees, or weatever else may be growing, cannot lay hold of it.

Tillage also helps to bring together the various particles of the soil, causing them to form chemical unions that are essential to vigorous plant growth. It so aerates the soil that the bacteria can not only live but flourish; for there must be myriads of these tiny friends of the farmer and fruit grower at work if we get the best crops.

Tillage keeps down other growth that would, in some degree, rob the trees of moisture and fertility. Whatever grows in an orchard besides the trees, when they are of bearing age is sure to detract from them, except it be leguminous crops that are allowed to become incorporated with the soil. These, especially cow peas and clover, I think a decided advantage, but weeds, grass, etc., should not be allowed to grow in orchards except to come up in the fall and lie on the ground over winter.

Manure of almost any kind is an advantage and usually a necessity in an old orchard. Spread on all the stable manure that can be spared from other crops. It matters little what time of year it is applied, so that it is put on. Commercial fertilizers are very helpful, especially those having an abundance of potash and phosphorous in them. Feed the trees liberally if it is expected that they will bear liberally.

Spraying is also a necessity in these days of insect and fungus scourges. The whole subject of spraying is so well set forth in the government and state bulletins and in the rural papers that it is not necessary that much should be said here about it, except to urge that there be no neglect of it. There is about as much need of spraying as of cultivating an orchard. The details are mentioned so often and so well that there need be no lack of information about them.

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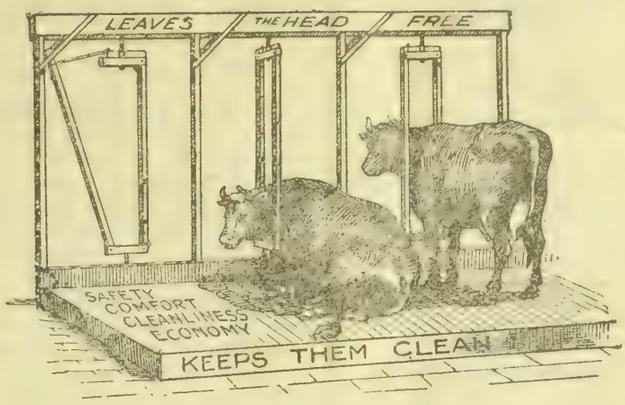

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C. W. McDougall, Dairy Inspector, staff Contributor.

Milk to a Pound of Butter.

Producers and manufacturers of milk often have need of a reference table showing the quantity of milk required to produce a pound of butter. The true ratio of milk to butter is determined by the percentage of butter fat in the milk. The table below presented by the New York Farmer shows the pounds and quarts of milk used to produce a pound of butter, starting with 3 per cent. fat milk and proceeding by one-tenth of one per cent. increase up to 6 per cent. fat milk. In this computation we have used 2 15 pounds as weight of a quart of milk, and have reckoned the butter at 85.7 per cent the usual ratio. The first column shows the fat percentage of the milk, the second column shows the number of pounds and the third column shows the number of quarts of milk of the given degree of richness required to make one pound of butter, the computations being carried to the third decimal place.

Butter fat	Lbs. Milk to Lb. Butter	Qts. Milk to Lb. Butter
3.0 per cent	28.566	13.286
3.1 per cent	27.651	12.861
3.2 per cent	26.781	12.456
3.3 per cent	25.969	12.078
3.4 per cent	25.205	11 723
3.5 per cent	24.485	11.388
3.6 per cent	23.805	11.072
3 7 per cent	23.162	10 773
3 8 per cent	22.552	10.489
3 9 per cent	21.974	10.220
4 0 per cent	21.425	9 965
4 1 per cent	20 902	9.722
4.2 per cent	20.404	9.490
4 3 per cent	19 930	9.269
4 4 per cent	19.477	9.059
4 5 per cent	19.044	8.857
4 6 per cent	18.630	8.665
4 7 per cent	18 234	8.481
4 8 per cent	17 854	8.304
4.9 per cent	17.489	8 134
5.0 per cent	17.140	7.972
5.1 per cent	16 803	7 811
5.2 per cent	16.430	7.665
5.3 per cent	16 169	7.520
5.4 per cent	15 870	7 281
5 5 per cent	15.581	7 247
5.6 per cent	15.303	7.118
5 7 per cent	15 035	6 993
5 8 per cent	14 775	6 872
5.9 per cent	14.525	6.756
6.0 per cent	14.283	6.643

Variation of Fat in Milk.

Prof. C. H. Eckles of the Missouri Agricultural College has been making quite exhaustive experiments for the purpose of solving the problem of the variation of fat in milk which has for years been a question that scientists and dairymen alike have been studying to understand. The point at issue has been whether the fat in cow's milk could be increased by feeding and it has been difficult for farmers to believe that the "richness" of the milk could not be increased by feeding the cow heavily on feeds rich in fat-making material. Results of the most accurate experimenting have not confirmed the popular opinion held and scientific men have quite generally agreed that the percentage of fat is a characteristic of the individual cow and cannot be increased by feeding to any appreciable extent.

Prof. Eckles' investigations seems destined to throw some light on the extreme production of butter fat that is secured in some of the seven-day tests and other tests of short duration. Prof. Eckles' findings follow :

"During the last few years considerable data has been gathered in our experimental work here with dairy cows which indicate that it is possible in another way to increase the per cent. of fat to an abnormal degree for a short time and probably to a less degree for a longer time. The rule seems to be that when the ration of a cow is insufficient to support her milk production and she draws on the fat stored on her body, that the per cent. of fat in the milk is increased. The reverse seems to be ture as well; that is, when she is gaining in weight or storing fat on the body there is a tendency for the per cent. of fat in the milk to be lower. This increase in the per cent. of fat in milk due to transfer of fat from the body to the milk is most marked immediately after calving.

"In the course of one of our investigations a Holstein heifer calved in as fat a condition as it was possible to get her by continuous heavy feeding from birth. Another heifer of practically the same age and breeding, was fed from birth until she came in milk on a ration of skimmilk and hay without any grain whatever. As a consequence, she was decidedly thin at calf birth. The milk of the heifer in good condition tested over 4 per cent at the start, while the milk from the one in thin condition tested about 3 per cent. The fat heifer declined in weight for several weeks and during this time continued to show a high per cent. of fat. When her weight became stationary her per cent. of fat declined until it was practically the same as the other. The thin heifer made no decline in weight and showed no decline in the fat in her milk. Later she began to gain in live weight, she having been put on a liberal grain ration immediately after calving. Her per cent. of fat increased slightly until the two became practically together. Similiar results have been obtained with two other pairs of heifers under similiar treatment. The most marked example of how this works out is shown in the following :

A mature Jersey cow was fed a liberal ration for two months before calving in order to get her unusually fat. Immediately after the birth of the calf she was put on a ration that was sufficient only to maintain her body weight, according to the maintenance values sa usually estimated. She was fed for thirty days on a ration of three and one-half pounds grain and seven pounds hay a day, which was estimated body maintenance. At the beginning she produced 21 pounds of milk a day. During the thirty days the decline in milk was very slight. Indeed, at the end of the thirty day period she was producing 19 1-2 pounds a day. During this time she lost 115 pounds in live weight. In the beginning she was smooth and excessively fat for a Jersey cow, but at the end of thirty days she was decidedly thin and emaciated. Beginning with the twenty-eighth day it was observed that she was becoming weak and she staggered as she walked. On the twenty-ninth day she could scarcely get up when down, yet she produced 19 1-2 pounds of milk. It was not considered safe to continue the test any longer and her ration was increased to a normal amount. During the thirty days this cow produced milk continuously without any feed whatever to supply the nutrients. It is evident that the solids in this milk must have been taken from the body and the decline of 115 pounds in weight shows this was the case. During the thirty days 43 pounds of fat and 52 pounds of other solids were produced in the milk. The average per cent. of fat during the thirty day was 6 9; the normal test for this cow is slightly under 5 per cent. Within forty-eight hours after her feed was increased at the end of the thirty day period the per cent of fat in the milk declined about 2 per cent.

"Further and more extensive trials are necessary to fully prove this law and especially to determine its metes

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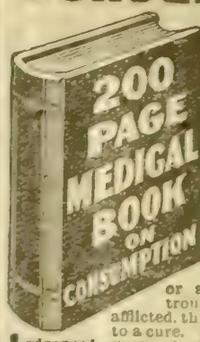

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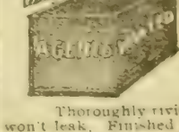

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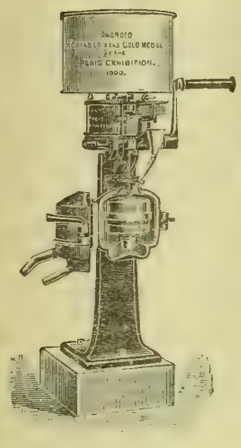

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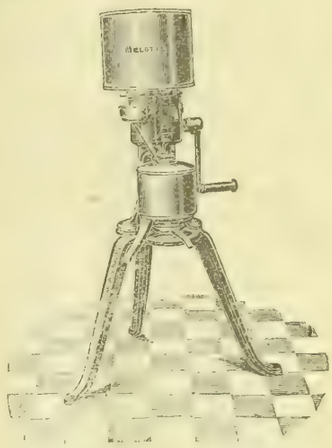

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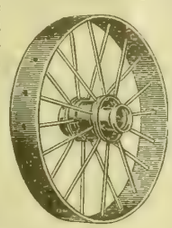

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and bounds, but it is believed these results are of great significance in a number of ways. In the first place it will mean that short periods are absolutely valueless in carrying on feeding trials with dairy cows. If a cow will produce milk for a month without having any food to furnish the necessary material, it is evident that the effect of any feed can not be measured in a short period. In an experimental way it also has a bearing on methods of carrying out many lines of investigation, as, for example, the effect of feeds of the composition of milk, since here we will have to avoid the probability that milk fat taken from that stored in the body and secreted in the milk is of different composition from normal milk fat.

"Another interesting question brought up by these experiments is its relation to the common method of carrying on seven-day tests of dairy cattle. It has been the subject of comment frequently by leading authorities that in recent years much higher fat percentages are secured in seven-day tests than was formerly the case. The possibility of increasing the per cent. of fat in milk for a period after calving by the means mentioned has apparently been used by those who are the most successful in making these phenomenal seven-day tests. A cow that will average 3.2 per cent. of fat for the year, can with reasonable are certainty be made to test 4 per cent. or even higher for a week if properly handled. The way it is done is to fatten the cow as much as possible before calving. Then after calving the animal is fed only moderately and the test is begun within four or five days. Under these conditions the animal has insufficient feed to support the enormous milk fat production. Since her body is loaded with fat, this fat is taken from the tissues and a large amount of it is secreted in the milk.

"As said before, a large amount of additional investigation will have to be carried on to establish the limitations of this principle and to make it possible to understand its full significance. The investigations under way in this line, it is hoped, will supply data that will make it possible to reach some definite conclusions. The material already at hand is sufficient and so consistent in every respect that in the opinion of the writer there is no doubt of the accuracy of the general proposition laid down. The reason for presenting this preliminary statement regarding work is that it will be some time before results can be worked out in detail, and on account of the importance of the subject and its many applications, it seems to the writer to justify this preliminary notice."

Feed and Richness of Milk.

There is much that may be done to influence the quantity of milk that any certain cow will give, but very little effect on the richness of it can be obtained by varying the feeding. The question has often arisen as to whether or not feeding meal will cause a cow to give milk with a large percentage of butterfat. Once we heard one of the best known dairy farmers in Canada state that the feeding of meal would cause a cow to give richer milk; yet the general trend of experimental work shows that meal has little or no effect upon the percentage of fat in milk, but does tend to increase the flow or quantity of milk, especially where cows are not being fed to their capacity. There are few apparent exceptions to the rule, but they only serve to emphasize the law that cows govern the quality or percentage of fat in milk, and feed and cow govern the quantity.

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Sheep Breeding Problems.

Is in-and-in breeding a correct practice to follow? We answer yes and no. Safe with wise selection and a mighty lever for improvement carried down to the danger line, and a powerful engine for destruction carried beyond that point. Many are the one-time noted breeders who have plunged headlong into that pitfall. They became giddy over success and were too proud and narrow to recognize merit in other strains. They harped upon concentrated blood for potency, forgetting that type was the measure of individuality and that type depended upon type breeding.

With how close relationship is mating admissible? Never with sire and daughter and sister. If conditions seemed to demand it I would mate half brother and sister where the dams of each were of reomtt blood, and the progeny of half brother by the same sire whose dams were remote from each other. This is a favorite cross with me. Some strains will bear more in-breeding than others. The Wilkes strain of trotting horses is conspicuous in this respect. To my mind the greatest danger that lies before American merino breeders is the kindred blood of all our flocks.

Are so-called violent crosses dangerous and unscientific? No. What are violent crosess? The mating of a fine-fleeced ewe with a strong-stapled ram, a plain light-fleecedewe with a wrinkley, dense, heavy-fleeced ram. Go beyond your ideal in a ram in the object sought for the first cross and to your ideal for subsequent crosses, and stay there. This is the cross-lot route to the goal.

Is uniformity in a flock the test of a breeder's skill and a measure of the value of his blood line? No, uniformity is but another name for mediocrity. The blood that improves a breed comes from the flock of the breeder whose motto is good, better, best. Never use a ram more than two season on the same ewe if it can be avoided. Who ever saw the third crop of lambs from the same sire and dams that were equal to the first and second crops? If the nick is great use a good son and then go back to the old ram. Who ever saw a really great ram that had a full brother a year younger that was his equal? I never did. I killed a brother to Don Dudley for mutton (and it was as good a fate as he deserved) and sold a full brother to Kaiser for $2.50 to be slaughtered. Great are the mystries of the breeding problem!

We have taken the American Merino as a special subject for discussion because he represents one of the highest achievements of the breeder's art, and because the family should be preserved as the fountain-head to be drawn from for fieece improvement, and because the principles involved in his successful breeding apply to all breeds and kinds of domestic animals. Many long centuries have intervened since One queried "How much better is a man than a sheep?" Then put the man behind the sheep and be true to your own manhood and to your brother man. Let your name stand for all that is moral, honest and upright, and let your methods and practices be an open book, read and known to all men. If he who makes two blades of grass to grow where one grew before is a public benefactor, how much more is he a benefactor who enhances the meat or wool-producing capacity of a breed. Verily he should rank among princes and not among mean men. "But," says one, "are all these rules to be observed in successful sheep breeding, and are the principles laid down inviolable?" We answer yes, and more too. In these strenuous days of heroic endeavor, when success is measured by marvelous achievement, every detail that contributes to the end becomes an essential. I pity the man who has no ambition to stamp his name and impress upon something that will benefit his fellows. Such a one is a weakling and unworthy of true manhood and his generation.—John P. Ray, before Pennsylvania Live Stock Breeder's Association.

The old, old story, told times without number, and repeated over and over again for the last 36 years, but it is always a welcome story to those in search of health—There is nothing in the world that cures coughs and colds as Chamberlain's Cough Remedy. Sold by all dealers.

Management of a Ram.

Sheep are, or may be made, prolific animals. Naturally the ewes are twin bearers, and will breed twice in a year. There is, however, a prevalent belief that one lamb in a year is sufficient, and that twins are a nuisance. Doubtless this exact expression is the common fact, and the owners of ordinary flocks are averse to the birth of twin lambs on account of the bother of caring for them.

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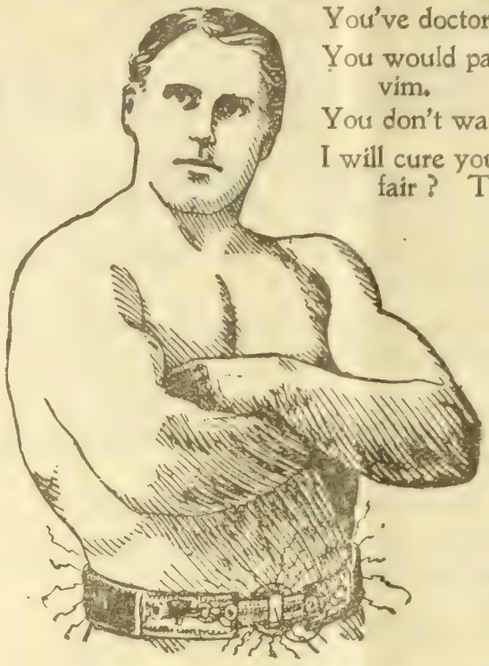
Wear My Electric Belt Free Until I Cure You.



You've doctored and doped till you are sick of it all.

You would pay for anything that would give you back your old vim.

You don't want to pay out any more money till you are sure.

I will cure you first, and you can pay me afterwards. Is that fair? Then get in line.

I know what I can do, because I've done it and am doing it every day. I'm sure that Electricity is the life, and that I can restore it where it's lost. So if you need what I offer and don't want to risk my price, wear my Belt free until you are cured, then you can pay me.

And when you do pay me the cost is less than a short season of drugging, and how much more pleasant! You put my Belt on when you go to bed; you feel the soothing, exhilarating vigor flowing into your weak body, and while you sleep peacefully it fills you full of the fire of life. You wake up in the morning feeling like a giant.

Now I can't cure everything. I don't claim to, and I won't take a case that I don't feel sure of, but all these troubles which come from an early waste of vitality, from dissipation of any kind, from decay of nerve power, or from any organic stomach, liver or kidney weakness, I can cure, and those are the cases I am willing to tackle and take the chances on. I am curing them every day.

All I ask is a reasonable security for my Belt while you are wearing it.

Miracles are worked every day. Read the story of Phillip McGahey, River Aux Pine, St. Gabriel, P. Q., as he gives it in his own words:

"DEAR SIR—I take the opportunity of letting you know the benefit your Belt has given me. I was a poor cripple before I got it, now I can stoop and pick up a pin with ease. It was worth a great amount of money the good it has done me. My advice is, that no home should be without one. I thank you for the benefit it has done me."

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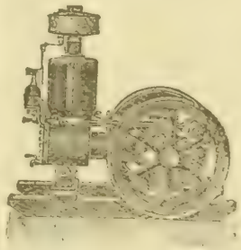

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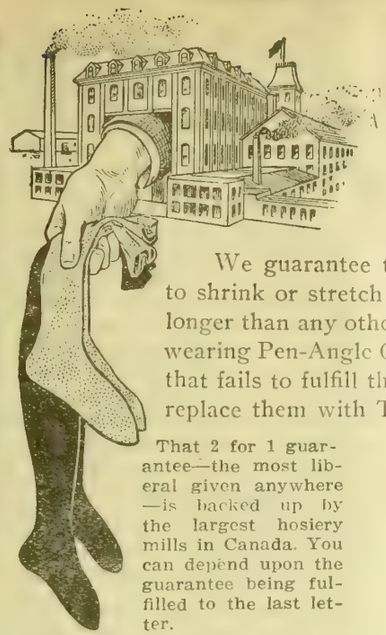
But nothing of value comes without proportionate labor or care, and the shepherd who desires to succeed in his business must make up his mind that nothing in his special line comes without working for it with head and hands. But much handwork may be saved by a little head work, and the actual labor incident to the proper care of a flock under the best management may be very much lightened by thoughtful, preparatory preparation.

So, if the right method is applied, there is no good reason why a flock may not treble in a year's time, and do it every time with success. We may take many lessons from the English shepherds, who by continued care for a few years, have succeeded in making their flocks treble the number of ewes bred annually. And this has been done through a course of careful feeding and breeding—both are necessary conditions of the case—for a few years. English shepherds have an advantage over us in the fact that their flocks are made life-long matters, and in the care of them things are done in preparation for years ahead. This is certainly a very important part of the business, but it cannot be evaded if we would succeed in the work. And it will pay. Two lambs are worth twice as much as one is! Here is the whole thing in a nutshell, as the saying goes. It is only consistent with the rest of the management of a flock in which there are so many great little matters, everyone of which is of equal importance.

The ram is the father of the flock, as was written two thousand years ago by the ancient shepherd poet, whose works still live as the very best authority and guide to a modern shepherd in the care of a flock. And the value of the ram is inherited from year to year, and generation to generation, if the whole of it is got out of it. Thus, once a flock is made to double the crop of lambs, the ewes so bred will permanently retain the habit if the necessary means are made continuous.

It is all in the feeding. All nature is subject to the same laws. Plants have been bred in this way to improved qualities and greater productiveness. Wheat has been increased by selection of seed and improved culture, from making one plant from one seed to the making of several, each of which bears an ear; and this of increased size and number of grains. Thus, a full hundred bushels of grain per acre has been made the rule, instead of a fourth as much. Corn has been improved in the same line up to a hundred and more bushels to the acre and this increased yield has been made a permanent habit. There are flocks of sheep which have been improved in this way in the production of lambs during the course of a few years, so that every year there are twice as many lambs as ewes, and a margin over to make up for accidents. But there are no cacidents in flocks managed in this way with all the care that may be possible. Everything comes out as exact as figures do, and these examples are instructive to us. The world—as we read—was given to mankind to possess and improve. This world possesses means literally to do as we wish with anything. This is only full possession, and it may mean a great deal to the enterprising shepherd if he will only realize the facts.

These matters are essentially timely now. Breed the ewes to the best ram possible. Feed liberally during the coupling season, and on to the season of lambing. It is no use doubling the seed of a crop if we do not apply the needed plant food to nourish the produce. The season is now on. And if due care is given, a beginning may be made in the improvement of every flock, until in good time the lamp crop may be doubled as easily as the corn crop may be. The principle appertaining to one applies precisely to the other.—Ancient Shepherd, in Sheep Breeder.



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No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black, light and dark tan, champagne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, $1.00; 6 pairs, $1.50.

No. 1175.—Mercerized. Same colors as 1720. Box of 3 pairs, $1.00; 6 pairs, $2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

No. 330. — "Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, $1.00; 6 pairs, $2.00.

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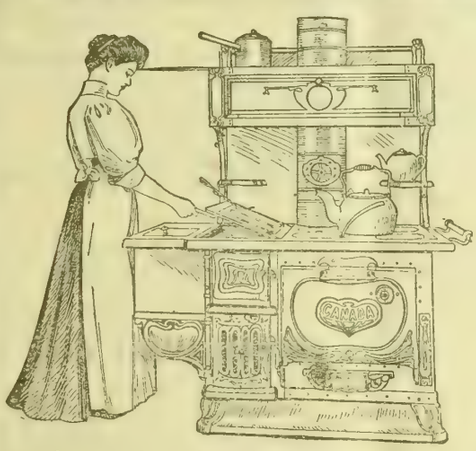

will fill the heart of an ambitious housewife with joy. Steel frames and plates and firm rivetting result, in the NATIONAL, in an oven that is, to all intents and purposes, hermetically sealed. It will stay that way for ten years, for twenty years, and even longer.

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THE HORSE.

Conditioning Horses Quickly.

A correspondent states that he owns a pair of farm horses, weighing about 1,200 pounds apiece, which he desires to put in market condition in the shortest possible space of time. He says they are four and five years old, but gives no inkling as to the breed, the feed he has on hand, nor the accommodation which he is prepared to give the horses.

Reply must, therefore, be made in the most general terms. If the horses must be worked at the regular farm labor it will be impossible to get the requisite amount of flesh on their bones in anything like a short time. Flies are bad at this time of year and the work exacting. If they must work at all it should be only half a day at a time, the other half to be spent in the stable, which should be darkened so as to repe the pestilential flies. Best of all it will be to let the horses remain altogether idle, not putting the harness on them from the time they are started until they are sold.

PRACTICE OF PROFESSIONAL FEEDERS.

In the United States, where many men make a specialty of conditioning draft horses for the market, the general practice is to shut the thin feeders up in box stalls, feed them all the ear corn and bright clover or timothy hay—clover for choice—they will eat, and at the end of 90 days or thereby sell them. In that length of time they will become as fat as butter, 300 pounds in the three months being a not uncommon gain. This method of feeding does rather better with the grades of the Percheron and Belgian breeds than it does with those of the British breeds, but it works very well with the latter if they are not too rough in their legs.

FOOD MUST NOT BE CHANGED.

Horses will fatten on almost any sort of grain if they are accustomed to it gradually and then no change is made. It is the sudden and great change in food that brings on digestive troubles, of which colic is the commonest example. Stick to whatever you start in with until the fattening is completed. For the grades of the Clydesdales and Shire a mixture of corn and oats, half and half by weight, will be found the most advantageous. The rule is that when a horse is working he should have a pound of grain for every hundredweight he weighs. In the instance of a horse weighing 1,200 pounds, he should then have 12 pounds of grain each day. He may require more to do his best and perhaps he will not clean that much up, but no matter, so long as the object is to force as much flesh as possible on him in the shortest possible space of time. He should have all he will clean up, but he should be brought gradually to his maximum capacity and then closely watched. The same rule holds good as to the hay. A 1,200-lb. horse should never have more than 12 pounds of hay in 24 hours.

ONLY A LITTLE EXERCISE.

If these horses can not be given darkened box stalls then they should be turned out into a small yard for a few hours at nightfall. This yard should not be large enough to permit them to run and wrestle and work the flesh off themselves. The main point is to give them all they will eat, and of the best at that, and little or nothing to do. Horses treated thus give enormous returns for the grain fed them. This inquirer should have no trouble in making his horses gain 25 pounds each per week or 200 in 60 days.

FEED NO GRASS.

Grass is the poorest food that can be placed before a horse. It invariably, when used occasionally or as part of a ration, causes indigestion, which is evidenced by the droppings. Besides, people, who are willing to pay for flesh on the market, do not want it made on grass. They want it made of good, hard grain and old hay, and they are willing to pay for it accordingly. Incidentally it may be observed that the time-honored custom of turning the work horses out at night to grass is all wrong. A horse needs about so much hay and grain anyway, in order to do his work properly. After he has had this, what is the sense of turning him out into a field to overload his small stomach with a great lot of washy, green stuff that contains no nourishment to speak of and serves only as a sort of aperient medicine ?—Canadian Farm.

Oat Hay for Horses.

Oat hay makes an excellent feed for horses, from the pure straw point of view, with the seed threshed out. Oats furnish the very best coarse cereal roughage.

Many persons feed oats unthreshed. The horses relish both straw and grain in this form. In certain sections it is quite a common custom to sow oats in the spring, and later, when the crop is well advanced, to cut and cure as hay, the same as one would handle timothy or other hay crops. In this case the crop is not quite so mature as it would be if to be treated for threshing out the grain.

If well cured, this makes a bright and very palatable hay. The experiment stations say that oat hay is ranked as materially better than timothy, the former containing 4.3 per cent. digestible protein and 46.4 per cent. carbohydrates, compared with 2.8 per cent. digestible protein and 43.4 per cent. digestible carbohydrates in timothy Naturally, the greener the condition of the oats, when cut, the poorer will be the crop in digestible food. When cut for hay, oats should be mown as any other grass and treated in a similar manner. Heavy succulent oats may be cut in the morning, after the dew is off, and then kept stirred to let in the air so as to cure out well. With warm, drying weather it may be cocked the same afternoon, and if opened up and exposed the next day to a bright, clear sky, possibly may be hauled in that afternoon. Of course, the essential thing is to get in the crop free of excess moisture so that it will not mildew in the mow. It will quite likely take three days to do the entire job.

One of the commonest faults in feeding horses is the lack of variety in feed. Considering the number of different grains and feed stuffs, it does seem strange that every team owner should not provide for his animals a ration that would be perfectly acceptable to their systems at all times. It is a fact, however, that no more than 20 per cent. give what may be termed a well-balanced ration The other 80 per cent. still cling to the old ration of corn and hay, or oats and hay, which practical experiments have long since proved to be expensive and wasteful. If you want the best results feed a ration that contains all the elements of nutrition in properly balanced portions. Corn alone is not a well balanced grain for feeding, neither is oats or barley. Of the three grains, oats is probably fed more extensively than either corn or barley combined. Barley is rapidly gaining favor as a feed, however, and when properly combined with the other grain makes an ideal ration. When you feed a ground ration, you prepare it for quick digestion. Your animals utilize it more readily and there is practically no waste. It should be remembered that the horse digests its food quickly, and whatever ration you feed should be prepared with a view to supply the nutrition the horse needs. Your horses will work better and keep in condition on five or six quarts of ground feed, mixed, than they will on eight quarts of whole grain. Feed a variety of grains, properly balanced, and have it well ground, and you will not only have better horses, but it will cost you less money to obtain this much-desired result.

Roaring in Horses.

I have lately bought a horse which made a roaring noise when being driven. I would like to know if you could suggest a cure for it.—H. W.

The roaring arises from a disproportion between the size of the horse's chest, and the passages which convey air thereto. So that when the animal is pressed by exercise to breathe rapidly, the air, rushing violently through a tube of too small porportions, makes a loud grunting sound. Tne obstruction, either local or general, in the respiratory canal, may exist in the larynx, the cartilaginous box occupied by the mechanism of the voice.

The system of tight-reining is, in many cases, a cause of roaring. It forces the lower jaw on the neck; the larynx and the portion of the windpipe immediately beneath it, become flattened, and the respiratory passage not obstructed, but in a manner closed. This mischief is usually done when the horse is young. It is effected in some measure by the impatience of the animal, unused to control, and suffering pain.

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We are offering for the next 30 days our No. 15 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. If not satisfied we will refund the amount.

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Cattle and Sheep Labels.
The greatest thing for stock. Now is the time to get posted. Write to-day for free sample and circular.
F. G. JAMES, Bowmanville, Ont.

POULTRY.

Poultry Diseases at a Glance.

The following hints will, perhaps, help in the prompt detection of the difficulty or disease which may be troubling a fowl :

Admistering Medicine.—Too often is a profitless expense. Avoid the necessity for it by maintaining the healthiness of the flock.

Abdominal Dropsy.—Abdomen distended with liquid, hangs down. Fowl loses appetite, becomes weak and pale.

Anaemia.—Poor blood or poverty of blood from lack of proper nourishment, pure air, and sunshine.

Apoplexy.—Bursting of blood-vessel in the brain prostrates the bird ; comb purple.

Asthenia.—"Going light," due to starving, digestive disorder, vermin, blood poison.

Atrophy of liver.—Stupor and possibly convulsions, may indicate wasting of the liver, induced by lack of exercise, over-feeding, and unbalanced rations

Breakdown.—Abdomen hangs down at rear from excess of fat, fatty degeneration, or disorder of the oviduct.

Broken Bones.—Unless the fowl is very valuable, treatment is avoided by killing for the table.

Bronchitis.—Cold or catarrh may lead to inflammation of the throat, whistling, or rattling breath, due to exposure to cold, foul air, draughts, irritating dust.

Bumble-foot.—Cushion of the foot has a corn with abscess. Joints of leg may also be affected. Usual cause, narrow perches, alighting on hard floor from high perches, embedding of pebble in sole of foot.

Canker.—Painful attempts at swallowing, white, grey, or yellow patches develop on the membrane lining the mouth or throat Due to colds, catarrh, roup, exposure to cold, dampness, draughts, foulness.

Catarrh.—A common cold may continue until breathing is hindered by inflammation and mucous secretions collected in nostrils and mouth. There is drowsiness, loss of appetite, ruffled feathers, wheezing.

Chicken Pox.—Yellowish pimples on the head and underside of wings, loss of sight, weakness, paleness.

Choking.—Shaking of the head, straining and jerking of the neck in trying to swallow.

Cholera.—Diarrhoea, with yellow discharges, rough plumage, drooping wings contracted neck, great thirst, pale comb, exhaustion ; contagious.

Colds.—Inflammation of the nostrils and throat from catching cold is shown by sneezing and running at the nostrils, due to exposure to chilling temperature, dampness, draughts.

Congestion of the Liver.—Overfatness and sluggishness sometimes accompany congestion of the liver, due to overfeeding, starchy rations, lack of exercise, and disgestive disorders.

Congestion of the Lungs.—Overcharging the blood-vessels of the lungs, following a sudden or severe chilling, may occur in young chicks or moulting fowls. There is rapid, labored respiration, stupor, and purple color of comb and wattles.

Constipation.—Stoppage of the bowels or clogging of the vent may result from digestive disorders, due oftentimes to lack of green food and failure to exercise.

Consumption.—Wasting and weakening of the body may be accompanied by foetid diarrhoea. The breathing may be somewhat rasping, and there is paleness of the comb and wattles.

Corns.—Hardened and thickened cuticle of the sole of the foot; due to narrow perches, alighting from high perches on hard floor, pressure of embedded pebble.

Crop-bound.—Impaction and enlargement of the crop from gorging or stoppage.

Depraved Appetite.—Gorging with food, or swallowing substances unsuitable to the digestive tract, causing indigestion or stoppage. May result from lack of grit.

Diarrhoea.—Looseness of the bowels, caused by sudden chilling or digestive disorders.

Diphtheria.—See roup.

Dysentery.—Excessive and persistent diarrhoea, due usually to filthy food or drink or foul conditions.

Eczema.—White pimples show on wattles, increase in size, run together, discharge, and become crusted.

Enteritis.—Inflamed condition of the mucous lining of the stomach and intestines, resulting in acute diarrhoea, and caused by poison, internal parasites, over-heating, fermented food, condiments, filthy drinking-water; especially liable to attack growing chickens and moulting fowls.

Eversion.—Protrusion of the inflammed oviduct from the vent may result from straining in laying an egg which is malformed, extra large, or broken within the oviduct or cloaca.

Fatty Deeneration.—Fatty particles taken the place of the cell tissue of internal organs. Fowls become heavy and sluggish.

Frost-bite.—Freezing of comb and wattles shows in stiffness and purple color of the frozen part, which later turns black, and finally drops off.

Gapes.—Due to irritation of the windpipe by parasites. Bronchitis may cause gaping.

Gastritis.—Loss of appetite, constipation, ruffled feathers, drooping wings, emaciation, exhaustion, due to inflammation or catarrh of the stomach

Hepatitis.—Loss of appetite, sluggishness, pale yellow skin over the abodmen, and diarrhoea; may show inflammation of the liver.

Inflamed Oviduct.—Irritation of the oviduct may cause straining, rubbing of the abdomen along the floor, ruffled plumage, stupor, and paleness.

Jaundice.—Excess of bile, resulting from excess of grain food, may even cause a greenish stain to show through the walls of the abdomen.

Leg Weakness.—Staggering gait, flapping of wings to aid in walking, moving along on the hocks, squatting while eating.

Peritonitis.—Failure to eat, restlessness, abdominal pain and heat.

Pip.—A dry scale forms on the tongue, due to breathing through the mouth because of other diseases.

Pneumonia.—Panting for breath, crackling sound in the air-cells of the lungs; effect of sudden exposure to cold and damp conditions.

Poisoning—Salt, nitrate of soda, arsenic, lead, copper, phosphorus, may poison fowls.

Roup.—Discharges at nostrils and mouth, frothy or running eyes, swelled head, offensive breath, canker spots, difficult breathing and swallowing, loss of sight, exhaustion, are some of the signs of this scourge, which attack fowls especially when they are subjected to exposure to extremes of heat and cold, dampness, foulness, filthiness, and neglect.

Tuberculosis.—Wasting, fever, and sometimes diarrhoea are the exterior signs which may accompany the internal work of the tubercle bacillus.

Vertigo.—Giddiness, staggering gait, walking in a circle, slight convulsions, throwing of the head up and back or to one side, are signs of a rush of blood to the brain, with, possibly, a slight hemorrhage; especially liable to affect old and very fat fowls.

Worms.—Internal parasites; prepare the way for several diseases.

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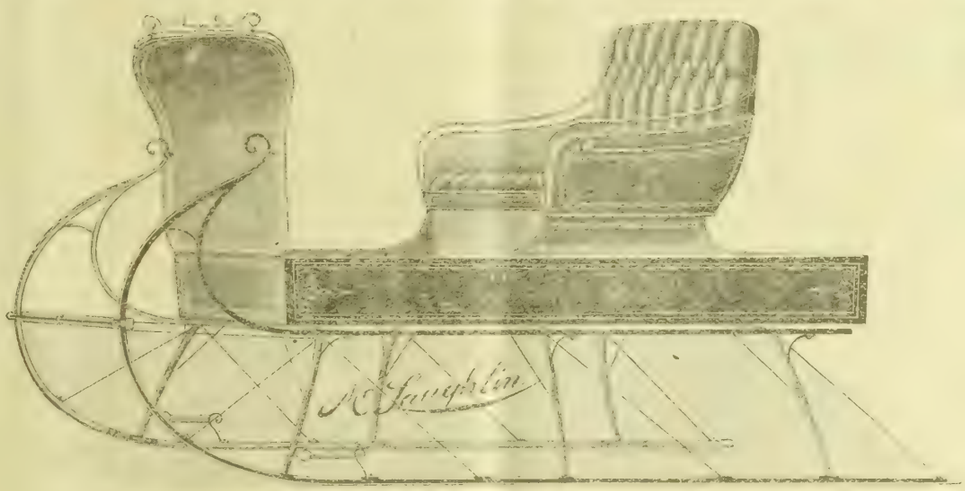

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The Return.

After long following of stranger faces
By untried hills and over fretful foam,
After long wandering in alien places,
Tonight I sleep at home.

Tonight the old house opens tender arms
To draw me in to its breast,
While, slow, a throng of scarce-remembered charms
Weaves me a spell of rest.

Ah, nowhere else in all this world can dark,
Come down so velvet-footed through the air
And spread its quiet tent, to dim to mark,
In all the world, nowhere!

With slow, reluctant colors in the west,
And spires outlined against the light afar;
Crown like upon a lonely cedar's crest,
The Jewelled evening star.

Distant, a truant cow-bell, lost and late,
With soft reiterated silver wo d,
Faint in the nesting-tree beside the gate,
Croon of a drowsy bird.

I shall lie down in an old, brooding room,
On restful pillows fashioned for my head,
And watch with drooping eyes amid the gloom
Dear shadows by my bed;

And breathe awhile the faint, familiar breath
Of dew-wet garden roses, half aware
Of murmuring voices in the hall beneath
And soft steps on the stairs.

Dear God of sleep, make me forget tonight
The way I came, the world I learned to roam;
Let me be dreamless till tomorrow's light
Wake me again at home
—Youth's Companion.

Miss Slimmens's Boarding House.

(Continued from last issue.)

How soon? About a week, if I can get the dress-maker to hurry up my things. I shall ruffle the white muslin myself. I guess I've been out of the millinery business so long there won't be any odor of brimstun follow me to Newport. I intend to pass myself off as a young lady of leisure, of only the most literal pursuits, who inherited my estates in Pennyville by contract. I wish I knew some agreeable person who was going along at the same time; I'm such a timid creature, and shall feel so unprotected in the cars. I sha'n't sleep much of nights till I'm ready, and the start is over; I feel so flustered at the prospect and the hurry and all, my nerves are quite unstrung. Taking that exterminator was one of the worst things I ever done. I shall send, to-night, by express, to Boston, for a new set of curls and braids, and—shut the door, Dora, please—and I've nigh about concluded to order a wig, and done with it. I think that poison took the color out of my hair, its certainly getting gray. I might color it, of course, as I've been doing for several years; but it's so thin and harsh. A nice, thick glossy wig of shiny false hair would be better, and not half the trouble. Only don't tell anybody; for I wouldn't have it get to Mehitable Green's ears for a fortune. I pulled her's off once, you remember, and I've no doubt she's waiting for me to get to wearing one, to return the complement.

You'd like to know what I received in that box that came from Boston, by express this morning? I've no objections to satisfying your curiosity, Mr. Little, nor that of any of the gentlemen who I see before me, gathered round the convivial board. That box contained ruches to sew round the flounce of the white tarletan you saw me making; which accounts for its being so light. Hey? What's that you remarked? A "preverse and wig-ged generation!" You ought to be ashamed of yourself, George, punning upon Scripture—hadn't he, Mr Bethuen? You don't intend to insinuate I'd tell an up and down wrong story about a trifle.

"'Trifles light as air,
Are, to the jealous, confirmation strong
As proofs of Holy Writ.

Oh, George! clear out with you! You're the greatest pest and bother that ever sat down to a boarding-house table. Dora, if you don't put a stop to his nonsense, I'll have to take him in hand myself. What's that?—

"With all my 'alse, you love me still."

He! he! Well, a body might as well stop a mill-race as to stop your propensity for quizzing, only I trust the rest of my family will not take your insinuations in earnest. How? There goes Mehitable Green, and you must overtake her, and inform her of the arrival of a box of Russians from Boston? If that fellow hasn't actually caught his hat, and ran! Do you suppose he really intends to tell her anything, Dora? Only wants to tease me?_ He'll be the death of me yet, with some of his practicing jokes.

Have you any objections to my occupying this vacant seat, sir? The cars are so crowded and I am impelled to sit by somebody, and I have selected you because I feel certain you are a clergyman—now, have I not guessed aright? Oh, I judge by your white cravat, and your general appearance, sir, but mostly by your countenance; your countenance speakes for itself. I am a great observer of physiology; I flatter myself I can read a stranger at glance. The study of the human face devine is my particular fort, and brief as my experience with mankind has thus far necessarily been, I am seldom mistaken in my judgments. To New Port for my health, sir. And as I am impelled to travel without an escort, I have taken the liberty of placing myself under your temporal protection for the period of our mutual journey. I shall not undertake to explain, even to myself, the feelings which prompted me to select you out of all these people. There are mesmeric mysteries on earth which I seek not to unfold; I simply resign mysely to their guidance. Your clerical air, doubtless, had somewhat of an influence; but that was not all, I am certain that was not all.

Married? Not yet; time enough for that yet, sir. I've ever been opposed to early marriages, which has induced me to refuse the offers I have thus far received; though I feel that I am now arriving at an age when it will be safe for me to make a choice. Yet, while not a believer in early marriages, I have ever been a believer in love at first sight. What is your opinion upon that much-disputed topic, if I may make so free as to inquire? Have you never yet realized the sensation experienced by the poet, when he says, "Oh!—" mercy! how terrified I was! I thought there had been a collusion, certainly, there was such a jolt. Excuse me for the unpremeditated manner in which I threw myself into your protecting arms. I knew not what I was about until I felt your breath fan my cheek, which revived me from my trance of terror. I'm excessively timid; the wild fawn of the forest cannot be more so. I am afraid I mussed your shirt bosom, sir I aught never to attempt to travel alone.

What were we conversing about? You are right; it was about love at first sight, and you had not yet given me your opinion. You are a firm believer in it? I knew you was; I could tell it without asking. Is it not curious that I, clinging as I am, have never yet beheld the being in the shape of man to whom I should be willing to yield up my affections?—that is, never until recently—indeed I may say quite recently—within an hour. My retired and thoughtful life has been mostly given to meditation, music and poetry, and to the dispensation of that fortune which was mine into the channels of benevolence. Like the sensitive plant, I have shrunk from the touch of man. What! do you really get out at the next station? Then we have only to meet to part. I feel as if this was hardly to be the terminus of our acquaintance, so pleasant upon my side at least. Ah, thanks! you flatter me. You are sure you are the greatest gainer by our meeting? Perhaps you will not object to an interchange of cards; here is mine with my address in full. Providence may again throw us together. If you should be in Newport during the next two weeks, I shall have the pleasure of renewing our delightful intercourse. Ah! the cars progress more slowly—they pause. And must you go? I am much obliged to the protection you have offered a sensitive female. Farewell, till we meet again.

Baggage? Yes, lots of it. S'pose a lady is going to Newport without any baggage? I've six trunks and all of 'em packed tight. Want my checks, do you? Sure you're the check man? I'm not to be imposed on, if I am a female; I've been to Boston before. Oh, I've no doubt it's all right. Here they are in my pocket. But great goodnes, where's my purse? I've lost it, for it isn't in my pocket, and I felt it there only a little while ago—just before that gentleman left me, at the last station. He must have stolen it; nobody else could have done it, for it was on the inside next to him. And he looked so genteel and benevolent! What? A regular swell? Thought I might have known? I didn't—oh, I didn't! I thought he was a clergyman. Fifty dollars gone,

Women Who Suffer

from woman's ailments are invited to write to the names and addresses here given, for positive proof that Lydia E. Pinkham's Vegetable Compound does cure female ills.

Tumor Removed.
Chicago, Ill.=Mrs. Alvena Sperling, 11 Langdon Street.
Lindley, Ind.=Mrs. May Fry.
Kinsley, Kans.=Mrs. Stella Gifford Beaman.
Scott, N.Y.=Mrs. S. J. Barber.
Cornwallville, N.Y.=Mrs. Wm. Boughton.
Cincinnati, O.=Mrs. W. K. Housh, 7 Eastview Av
Milwaukee, Wis.=Mrs. Emma Imse, 883 1st St., *German.*

Change of Life.
South Bend, Ind.=Mrs. Fred Certia, 1014 S. Lafayette Street.
Noah, Kentucky.=Mrs. Lizzie Holland.
Brookfield, Mo.=Mrs. Sarah Lousignont, 207 S. Market St.
Paterson, N.J.=Mrs. Wm. Somerville, 195 Hamburgh Avenue.
Philadelphia, Pa.=Mrs. K. E. Garrett, 2407 North Garnet Street.
Kewaskum, Wis.=Mrs. Carl Dahlke.

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Worcester, Mass.=Mrs. Dosylva Coté, 117 Southgate Street.
Indianapolis, Ind.=Mrs. A. P. Anderson, 1207 E. Pratt Street.
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Cincinnati, Ohio.=Mrs. E. H. Maddocks, 2135 Gilbert Avenue.
Mogadore, Ohio.=Mrs. Lee Manges, Box 131.
Dewittville, N.Y.=Mrs. A. A. Giles.
Johnstown, N.Y.=Mrs. Homer N. Seaman, 108 E. Main Street.
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Louisville, Ky.=Mrs. Sam Lee, 3523 Fourth St.
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Detroit, Mich.=Mrs. Frieda Rosenau, 544 Meldrum Avenue, *German.*

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Minneapolis, Minn.=Mrs. John G. Moldan, 2115 Second Street, N.
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Paw Paw, Mich.=Mrs. Emma Draher.
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Coffeeville, Miss.=Mrs. S. J. Jones.
Cincinnati, Ohio.=Mrs. Flora Ahr, 1362 Ernst Street.
Cleveland, Ohio=Miss Lizzie Steiger, 5510 Fleet Avenue, S.E.
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Dyersburg, Tenn.=Mrs. Lue Hilliard, R.R. 1.
Hayfield, Va.=Mrs. Mayme Windle.

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Herrin, Ill.=Mrs. Chas. Folkel.
Winchester, Ind.=Mrs. May Deal.
Dyer, Ind.=Mrs. Wm. Oberlob, R. F. D. No. 1.
Baltimore, Md.=Mrs. W. S. Ford, 1938 Lansdowne Street.
Roxbury, Mass.=Mrs. Francis Merkle, 13 Field Street.
Clarksdale, Mo.=Miss Anna Wallace.
Guysville, Ohio.=Mrs. Ella Michael, R.F.D. 3.
Dayton, Ohio.=Mrs. Ida Hale, Box 25, National Military Home.
Lebanon, Pa.=Mrs. Harry L. Rittle, 233 Lehman Street.
Sykes, Tenn.=Minnie Hall.
Detroit, Mich.=Mrs. Louise Jung, 332 Chestnut St.

Ovarian Trouble.
Vincennes, Ind.=Mrs. Syl. B. Jerauld, 508 N. Tenth Street.
Gardiner, Maine.=Mrs. S. A. Williams, R. F. D. No. 14; Box 39.
Philadelphia, Pa.=Mrs. Chas. Boell, 2407 N. Garnet Street.
Plattsburg, Miss.=Miss Verna Wilkes, R.F.D. 1.

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Woodside, Idaho.=Mrs. Rachel Johnson.
Rockland, Maine.=Mrs. Will Young, 6 Columbia Avenue.
Scottville, Mich.=Mrs. J. G. Johnson, R.F.D. 3.
Dayton, Ohio.=Mrs. F. R. Smith, 431 Elm St.
Erie, Pa.=Mrs. J. P. Endlich, R. F. D. No. 7.
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Philadelphia, Pa.=Mrs. John Johnston, 210 Siegel Street.
Christiana, Tenn.=Mrs. Mary Wood, R. F. D. No. 3.
Pecos, Texas.=Mrs. Ada Young Eggleston.
Graniteville, Vt.=Mrs. Chas. Barclay, R.F.D.

These women are only a few of thousands of living witnesses of the power of Lydia E. Pinkham's Vegetable Compound to cure female diseases. Not one of these women ever received compensation in any form for the use of their names in this advertisement—but are willing that we should refer to them because of the good they may do other suffering women to prove that Lydia E. Pinkham's Vegetable Compound is a reliable and honest medicine, and that the statements made in our advertisements regarding its merit are the truth and nothing but the truth.

out and out! Ha! the greatest gainer by our meeting, indeed? I shouldn't wonder. It's a mercy I didn't have all my money in my pocket; I'd sense enough to put the most of it in my bosom, pinned and sewed to my stays. Fifty dollars, hard-earned cash, and all my susceptibilities thrown away besides! Fifty dollars! That'll cut just so much off my stay at Newport, for I sha'n't spend a cent more than I laid out to. It's too bad! I'll renounce him—I'll renounce him to every police-officer in Boston. I'll leave a full description of his person at head-quarters. I'll offer a reward for his reprehension. Yes, I'll give a hundred dollars for the pleasure of confronting him in a court of justice, and being the means of consigning him to the State's prison. I'll make it my first business to go to the telegraph office, and have him telegraphed for. It's a burning and a crying shame when an unprotected female cannot travel upon an American railroad without running the risk of being robbed by genteel-looking men in white cravats. It's bad enough being smashed up pitched down precipices, but to be robbed every step by the nicest-looking— My watch is gone, too! broke right off from the chain! O dear, I believe I shall turn round and go home, I feel so sick and disheartened! I would not have parted with that watch for a hundred dollars. Here we are in the depot. Policeman! policeman! here! show me the telegraph office right away, and take my disposition. I've been robbed—shamefully robbed! O dear, if my journey begins in this way, I don't know what it'll end in! I only hope the detecting officers will secure that villain.

Describe him? Picture to yourself a wolf in sheep's clothing, going about seeking whom he may devour—a—I must be more identical, must I, in my description! Well, then, a black coat and a white cravat, and a large diamond on his left finger, and a pious-looking mole on the left of his nose, and a sanctimonious voice, and a meek look of the eyes, and black whiskers, and a ministerial air, about six feet tall, with small feet and a modest smile. Think you know him, do you? Famous gambler and pickpocket? O my! and to think that I sat beside him, that I confided in him, that I gave him my card! Only to think, me, Miss Slimmens, of Pennyville, giving my card to a gambler and a pickpocket! Humph!

(Continued next issue.)

A Thanksgiving Thoughi.

So much has been said concerning the prosperity of farmers that apparently all has been told, but the farmer's wife is a subject rarely touched upon, and one that is most worthy of mention. She is usually a good-natured, hard-working woman who has spent the best days of her life in a small house with no conveniences, surrounded by half a dozen healthy children who were a constant demand upon her energies and patience. Indoors and out alike, she has ever been at the head, engineering and overseeing less competent heads and hands. So, ever faithful, seldom fretful, rising early and retiring late, she has passed the meridian of life. When she begins to descend the western slope, may her journey become less arduous, and may she taste some of the good things of this life which after years of ceaseless toil have at last fallen to the lot of her prosperous farmer husband. May those boys and girls, now grown to manhood and womanhood, not forget whose hands toiled and persevered that they might become educated and honored citizens of this great country. May they not forget that "mother" herself was once young, and had the same dreams, the same long, long thoughts of youth that now are theirs. May they remember, too, that her dreams never materialized, and that the dreamer's life becomes a stern reality of painfully practical facts, which have hardened the once soft hands and given a tired, careworn look to the once pretty face. And may these children not forget that through it all "mother" has preserved the sweetness and cheerfulness which won the sturdy young farmer's heart and which now makes her doubly dear to those who know and love her.

This good wife and mother has earned a long vacation from hard work and worry, and may she not be deprived of the fruit of her labor. Do not, O prosperous farmer, celebrate your prosperity alone by buying fine stock, building great barns and cowsheds. Let a goodly portion of that wealth fall into the lap of the companion who has stood so faithfully and loyally by your side through dry season and wet, through grass-hopper year and chinch-bug pest. —LOTLIE L. SHELDON in the Farm and Fireside.

Why We Are Stronger.

The old Greeks and Romans were great admirers of health and strength; their pictures and statuary made the muscles of the men stand out like cords.

As a matter of fact we have athletes and strong men—men fed on fine strength making foods such as Quaker Oats—that would win in any contest with the old Roman or Greek champions.

It's a matter of food. The finest food for making strength of bone, muscle and nerve is fine oatmeal. Quaker Oats is the best because it is pure, no husks or stems or black specks. Farmers' wives are finding that by feeding the farm hands plentifully on Quaker Oats they accomplish a double result; the men go to their work with greater vigor and the expense of such feeding is less than with other foods. 2

Many school children suffer from contipation, which is often the cause of seeming stupidity at lessons. Chamberlain's Stomach and Liver Tablets are an ideal medicine to give a child, for they are mild and gentle in their effect, and will cure even chronic constipation. Sold by all dealers.

Halifax Prize List.

(Continued from page 37.)

Heifer, senior calf, 1, Chas. G. Pinkney; 2, W. A. Pinkney.

Heifer, junior calf; 1, Chas. G. Pinkney.

Champion bull, diploma, Chas. G. Pinkney, Prairie King.

Champion female, diploma, W. A. Pinkney, Grace S.

Bull and 3 of his get, diploma, Chas. G. Pinkney, Prairie King.

Cow and 2 of her offspring, diploma, W. A. Pinkney, Ohio Rose.

Breeders' Aged herd, 1, W. A. Pinkney; 2, Chas. Pinkney.

Breeders' young herd, 1, W. A. Pinkney; 2, Chas. G. Pinkney.

DAIRY CATTLE.

CYASS 19.—AYRSHIRES.

Bull, 3 years old and upwards, 1, Easton, Bros., Fizzaway's Heir; 2, McIntyre Bros., Whitehill Sunrise; 3, M. H. Parlee, Lord Dudly of Spruce Grove.

Bull, 2 years old, 1, C. A. Archibald, Morton Main's Guerthrope; 2, Easton Bros., Howie's Crusader; 3, M. H. Parlee, Gold Finder.

Bull, senior yearling, 1, Easton Bros., Flashlight of Spruce Row; 2, Retson Bros., Eastcourt Jock; 3, M. H. Parlee.

Bull, junior yearling, 1, McIntyre Bros., Starr of Spruce Brook Farm.

Bull, senior calf, 1, McIntyre Bros., Rising Sun; 2, John McDonald & Sons; 3, M. H. Parlee.

Bull, junior calf, 1, M. H. Parlee; 2, Easton Bros; 3, C. A. Archibald, St. Patrick.

Cow, 4 years old and upwards in milk or calf, 1, M. H. Parlee, Culcaigrie Hilda II Imp.; M. H. Parlee, West Newton Bloomer VII; 3, McIntyre Bros, White Lady

Cow, 3 years old in milk or calf, 1, C. A. Archibald, Gipsy of Bellevue; 2, C A. Archibald, Myinie of Bellevue; 3, M. H. Parlee, Krocktera Kathleen.

Heifer, 2 years old, 1, M. H. Parlee; 2, Chas. Symes; 3, C. A. Archibald, Wee Gerta.

Heifer senior yearling, 1 and 2, Easton Bros., 3, Retson Bros., Gardrum Wee Nan.

Heifer, junior yearling, 1, McIntyre Bros, 2, Easton Bros.; 3, McIntyre Bros.

Heifer senior calf, 1, Easton Bros.; 2, McIntyre Bros., Rose of S. B. Farm; 3, Retson Bros, Eastcourt Brightsmile

Heifer, junior calf; 1, M. H. Parlee, Maple Grove White Craig; 2, Easton Bros; 3, McIntyre Bros.

Champion bull, diploma, 1, C. A. Archibald, Morton Main's Guerthrope.

Champion female, diploma M. H. Parlee, Culcaigrie Hilda II.

Bull and 3 of his get, diploma, Easton Bros, Fizzaiway's Hero.

Cow and 2 of her progeny, diploma, M. H. Parlee, Culcaigrie Hilda II.

Aged herd, 1, Easton Bros; 2, M. H. Parlee; 3 C. A. Archibald

Breeders' young herd, 1, Easton Bros; 2, McIntyre Bros.; 3, C. A. Archibale.

CLASS 20.—JERSEYS.

Bull, 3 years old and upwards, 1, Glen View Farm La Chosse Foxey; 2 and 3, H. S. Pipes & Son, Blue Blood of Deutonia, Brampton Financier.

Bull, 2 years old, 1, Robert Robinson, Foxy of Meadow View; 2, Glen View Farm, Leonet's Trooper.

Bull, senior yearling, 1, Robert Robinson, Bonnie's Foxy; 2, Glen View Farm, Blue Blood of Glen View; 3, Robert Robinson, Diploma of Meadow View.

Bull, junior yearling, 1, Robert Robinson, Fontaine of Meadow View; 2, Glen View Farm Alice's Foxy.

Bull, senior calf, 1, H. S. Pipes & Son, Guy Blue; 2, J. E. Baker & Son, Victor Hugo; 3, Glen View Farm.

Bull, junior calf, 1, H. S. Bipes & Son, Nimph; 2, Glen View Farm,

Cow 4 years old and upwards in milk or calf, 1, H. S. Pipes & Son, Brampton Monarch's Ora; 2, Robert Robinson, Hood Farm Bonnie; 3, Glen View Farm.

Cow, 3 years old, 1, Robert Robinson, Belle of Hood Farm; 2, Glen View Farm, Golden Zaphi; 3, Robert Robinson, Figgis of Meadow View.

Heifer 2 years old, 1, Glen View Farm, Norwood Golden, 2, Robert Robinson, Sylvia of Meadow View; 3, J. E. Barker & Son.

Heifer, senior yearling, 1, C. T. Elderkin; 2, H S. Pipes, Babbitt; 3, Robert Robinson.

Heifer, junior yearling, 1, H. S. Pipes & Son, Olive; 2 and 3, Glen View Farm.

Heifer, senior calf, 1, H, S, Pipes & Son, Belle Blue; 2, H. S. Pipes & Son, Jennie Blue; 3, Robert Robinson.

Heifer, junior calf. 1, H. S, Pipes & Son. True Blue; 2, Glen View Farm, 3, H. S Pipes, & Son Blue Bonnet.

Champion bull, diploma, Glen View Farm La Chasse Foxy.

Champion female, diploma, H. S. Pipes & Son, Brampton Monarch Ora.

Bull and 3 of his get, diploma, H. S. Pipes & Son, Blue Blood.

Cow and 2 of her progeny, diploma, Robert. Robinson, Hood Farm Bonnie.

Aged herd, H. S. Pipes; 2, Robert Robinson, 3, Glen View Farm.

Breeders' young herd, 1, H. S. Pipes; 2, R; Robinson; 3, H. S. Pipes.

CLASS 21.—GUERNSEYS.

Bull 3 years old and upwards, 1, Roper Bros., Golden Opinion; 2, M. M. Thompson; 3, Glen View Farm, Fairy's Nonpareil.

Bull, 2 years old, 1, Glen View Farm, Glen View's Sheet Anchor, 2, J. A. McGee.

Bull, senior yearling, 1, John McDonald & Sons; 2, Roper Bros,, Ritzey's Jem; 3, Glew View Farm, Image's Nonpareil.

Bull, junior yearling, 1, Glen View Farm, Queen Ovid's Anchor; 2, Roper Bros

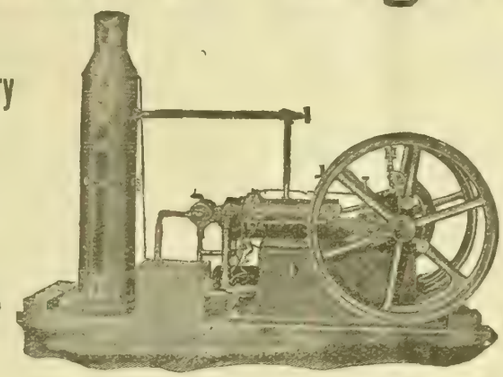
Bull, senior calf, 1, H. W. Corning, Island Prince of Hillside; 2, Glen View Farm, Glen View's Nonpareil; 3, Roper Bros.

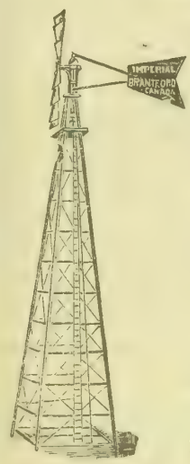
Bull, junior calf, 1, Glen View Farm, 2 and 3, Roper Bros.

Cow 4 years old and upwards in milk or calf, 1, 2 and 3, Roper Bros, Dolly of the Villet, Jennie's May, Beauty of Willow.

Ideal Gas and Gasoline Engines.

Stationary and Mounted. 1½ to 30 H. P.





Windmills, Power and Pumping.

Grain Grinders, Iron Pumps, Tans, Water Boxes, STEEL, SAW Frames, Concrete Mixers.

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Goold, Shapley & Muir, Company Ltd.,
BRANTFORD, - ONT.

Cowan's Maple Buds

(NAME AND DESIGN REGISTERED)

are different from and better than any other chocolate confection you ever tasted. Maple Buds are not made by any other concern, as the name and design is fully patented. Look for the name on every Bud.

The Cowan Co. Limited, Toronto. 87

"SILVER PLATE THAT WEARS"

Brides that Receive

Spoons, Forks, Knives, etc., will have something of lasting value, provided the various pieces are stamped

"1847 ROGERS BROS."

Pieces stamped with this trade mark are enduring in quality, beautiful in design and finely finished

In buying Baking Dishes, Trays, Pitchers, etc., ask for the goods of

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When answering advertisements please mention the MaritimeFarme

ABSORBINE

will reduce inflamed, swollen Joints, Bruises, Soft Bunches. Cure Boils, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle at dealers or delivered. Horse Book 7 D free.

ABSORBINE, JR., for mankind, $1.00 per bottle. Reduces Varicose Veins, Varicocele, Hydrocele, Goitre, Wens, Strains, Bruises, stops Pain and Inflammation

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LYMANS Ltd., Montreal, Canadian Agents.

WHEN YOU WANT THE BESTIN

MONUMENTS

Consult J. J. MacLEOD,

Stewiacke, N. S.

Manufacturer and Designer in all the best grades of Marble, Granite and Freestone

All orders will receive careful attention and prompt delivery. Good workmanship at lowest prices

Gold Watch Free!

A Lady's or Gents' Solid Gold-filled Watch Free for selling 10 boxes of Dr. Marcil's famous Compound Pills, at 25c a box. They are the greatest remedy for the cure of indigestion, constipation, impure blood, liver and kidney diseases and all female weaknesses With the pills we send ten articles of jewelery to give away with the pills, which helps you to sell. Send us your name and address and we will send you the pills postpaid. When you have sold them send us the money, $2.50, and we will send you a Lady's or Gent's Stem-wind or Stemset Watch. We are giving these watches to advertise our remedies. This is a grand opportunity to get a valuable watch free. Write to-day.

The Dr. Marcil Medicine Co.,
Dept. A., - Toronto, Ont.

STROUT'S

New Farm Buyer's Guide No. 28 just out is the best yet! Copy free; write for it to-day!

Stock, Crops, Tools and Furnishings.

All go with this 100 acre Maine potato farm, only 1½ miles to depot, city markets; cuts 30 tons hay, spring watered pasture for 15 cows, 150 apple trees, small fruits, 10 room house, painted, 2 big barns; 3 lakes in sight; everything but owner's clothing goes for $2,700, part cash; read all about it on page 120, "Strout's New Farm Buyers' Guide No. 28," just out, copy free; on page 128 see all details of $1,983.50 worth of potatoes sold from 12 acres. Dept. 2612. E. A. STROUT, Kent's Hill, Maine.

Don't Throw it Away

They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them; fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 25c, POSTPAID. Agents wanted.

Collette Mfg.Co., Dept. R. Collingwood, Ont.

Livermore Falls, Me. 234,260 Acres $3,900. Stock, Tools and Machinery.

One of the best stock and fruit farms in Maine; the fruit trees, if properly cared for, will yield a good income, leaving the net proceeds from stock and crops to be put in the bank; 1,000 Baldwin apple trees produce 800 barrels in season; cuts 65 tons hay; good loam soil; spring-watered pasture for 40 cows; 1,000 cords wood; land rolling, stone and wire fenced; near neighbors; one mile to school; five miles to railroad; mail delivered; two-story 10-room house, painted; running spring water; barn 40x50, tie up 30 head, good cellar, stable, also with cellar; ice house; only one mile from pretty lake; to settle quickly, owner will include two good cows, 12 hens; mowing machine, horse rake, hay tedder, disc harrow, spring tooth harrow, plows, wagons and all small tools for only $3,900. See page 124, "Guide 28," E. A. STROUT, Dept. 2612, Kent's Hill, Maine.

F.B. McNUTT & Co.,

Marble and Granite Dealers,

Queen St. Truro, - - N. S.

Cow, 3 years old, 1, Glen View Farm, Queen Ovid; 2, Roper Bros., Linda of Willow; 3, Roper Bros., Nina's Emma.

Heifer, 2 years old, 1, H. W. Corning, Dairy Maid of Hillside; 2, Glen View Farm; 3, Roper, Dolly of Willow.

Heifer, senior yearling, 1, Roper Bros.; 2, Glen View Farm; 3, H. W. Corning, Buttercup of Hillside.

Heifer, junior yearling, 1; Roper Bros.; 2, H. W. Corning, Dairy Queen of Hillside; 3, John McDonald & Sons.

Heifer, senior calf, 1, Roper Bros.; 2, John McDonald & Sons; 3, H. W. Corning, Emma's Image of Hillside.

Heifer, junior calf, 1 and 2, H. W. Corning, Bonnie's Image of Hillside and Columbine's Image of Hillside; 3, Roper Bros.

Champion bull, diploma, Roper Bros., Golden Opinion.

Champion female, diploma, Roper Bros., Dolly of the Villet.

Bull and 3 of his get, diploma, Roper Bros.

Cow and 2 of her offspring, diploma, Roper Bros., Dolly of the Villet.

Aged herd, 1, Roper Bros.; 2, Glen View Farm

Breeders' young herd, 1, W. H. Corning; 2, Roper Bros.; 3, Glen View Farm.

CLASS 22.—HOLSTEINS.

Bull, 3 years old and upwards, 1, J. D. Irvin, Togo Rooker; 2, Samuel Dickie Sir Rooker Posch Artis; 3, J. D. Irvin, Lord Albion Wales.

Bull, 2 years old, 1, Logan Bros., Mercena Vale.

Bull, senior yearling, 1, Samuel Dickie, Helbon De Kol's Prince.

Bull, junior yearling, 1, M. M. Thompson; 2, Logan Bros., Laddie.

Bull, senior calf, 1 and 3, Logan Bros.; 2, Samuel Dickie.

Bull, junior calf, 1 and 2, Logan Bros.; 3, J. D. Irvin, Lad of the Seaside.

Cow, 4 years old and upwards, in milk or calf, 1, Samuel Dickie, Locust Hill Nellie III; 2 and 3, Logan Bros., Clothilde Dorinda and May Rooker II.

Cow, 3 years old, in milk or calf, 1 and 3, Logan Bros., Minnie Rooker's Poem and Brookland's Louise De Kol; 2, Samuel Dickie, Blanche Lahonda.

Heifer, 2 years old, 1 and 3, Logan Bros., Tanta Rooker II and Artis Juba Oatka; 2, J. D. Irvin, Minnie Burke.

Heifer, senior yearling, 1, Samuel Dickie, White Lilac; 2, J. D. Irvin, Togo of Seaside; 3, Logan Bros., Empress Concordia.

Heifer, junior yearling, 1, Logan Bros., Empress; 2, Samuel Dickie, Flossie Cornelia Posch.

Heifer, senior calf, 1, 2 and 3, Logan Bros.

Heifer, junior calf, 1, 2 and 3, Logan Bros.

Champion bull, 1 and diploma, J. D. Irvin, Togo Rooker.

Champion female, 1 and diploma, Samuel Dickie, Locust Hill Nellie III.

Bull and 3 of his get, 1 and diploma, Logan Bros., Mercena Vale.

Cow and 2 of her offspring, 1 and diploma, Logan Bros., Clothilde Dorinda.

Age herd, 1, Logan Bros.; 2, J. D. Irvin; 3, Samuel Dickie.

Breeders' young herd, 1 and 2, Logan Bros; 3, Samuel Dickie.

CLASS 23.—GRADE BEEF CATTLE.

Cow, 4 years old and upwards, 1, W. W. Black; 2, Wm. Robertson.

Cow, 3 years old, 1, W. W. Black.

Heifer, 2 years old and under 3, 1, W. W. Black.

Heifer, 1 year old and under 2, 1 W. W. Black

Calf, under 1 year old, 1, W. W. Black.

Steer, 3 years old and under 4, 1, W. W. Black.

Steer, 2 years old and under 3, 1, W. W. Black.

Steer, 1 year old and under 2, 1, W. W. Black.

Steer calf, under 1 year old, 1, W. W. Black

Herd, consisting of 4 animals, over 1 year and under 3 years old, raised and owned by exhibitor, 1 W. W. Black.

CLASS 24.—GRADE JERSEYS AND GRADE GUERNSEYS.

Cow, 4 years old and upwards, 1 and 4, Roper Bros.; 2 and 5, Allison McDonald; 3, I. L. Harlten.

Cow, 3 years old, 1, Roper Bros.; 2, Allison McDonald; 3, D. Adams.

Heifer, 2 years old, 1, Allison McDonald; 2, Roper Bros; 3, D. Adams; 4, I. L. Harlten

Heifer, 1 year old, 1, Allison McDonald; 2, D. Adams.

Heifer, senior calf, 1, Roper Bros.; 2, Allison McDonald; 3, D. Adams.

Herd, 4 females, over 1 year old, 1, Roper Bros.; 2, Allison McDonald; 3, D. Adams.

CLASS 25.—ALL OTHER GRADES DAIRY CATTLE.

Cow, 4 years old and upwards, 1 and 2, McIntyre Bros; 3, John McDonald & Sons; 4, D. A. McDonald.

Cow, 3 years old, 1, 3 and 4, McIntyre Bros.; 2, Eddy Tupper; 5, D. Adams.

Heifer, 2 years old, 1, Eddy Tupper; 2, 3 and 4, McIntyre Bros.; 5, Allison McDonald.

Heifer, 1 year old, 1 and 4, Eddy Tupper; 2 and 3, McIntyre Bros.; 5, J. D. Irvin.

Heifer, senior calf, 1 and 3, Eddy Tupper; 2, McIntyre Bros.; 4, Allison McDonald.

Herd, 4 females, over 1 year old, 1, Eddy Tupper; 2 and 3, McIntyre Bros.

Cow and 3 of her progeny, diploma, Eddy Tupper.

CLASS 26.—FAT CATTLE.

Ox or steer, 3 years old, 1, W. W. Black.

Steer, 2 years old and under 3, 1, W.W. Black.

Steer, 1 year old and under 2, 1, W. W. Black.

Steer, under 1 year old, W. W Black.

Cow or heifer, 3 years old, 1, W. W. Black.

Heifer, 2 years old and under 3, 1, W.W. Black.

Heifer, 1 year old and under 2, 1, W.W. Black.

Heifer calf, under 1 year old, 1, W. W. Black.

Pair fat oxen or steers, under 3 years, 1, W.W. Black.

SHEEP.

CLASS 28.—LEICESTERS.

Ram, 2 shears and over, 1, Burder Goodwin.

Ram, shearling, 1, Albert Boswell; 2, Retson Bros.; 3, S. L. Boswell.

Ram lamb, 1 and 3, Albert Boswell; 2, S. L. Boswell.

Ewe, 2 shears and over, 1 and 3, Albert Boswell; 3, L.S. Boswell.

Shearling ewe, 1, Albert Boswell; 2, S. L. Boswell; 3, Retson Bros.

Sale of Clydesdales

About 1st December, Next

(Exact Date to be later announced)

By arrangement with the New Brunswick Department of Agriculture, I will offer

At AUCTION

— AT —

ST. JOHN, N.B.

A direct importation from Scotland consisting of

75 Clydesdale Mares

— AND —

3 Clydesdale Stallions

The mares will be mostly two and three years old and bred the past season to good stallions in Scotland.

The Department of Agriculture will pay the freight from St. John to purchasers station in New Brunswick.

TERMS—Cash or Notes Acceptable at St. John Banks

No restriction as to residence of purchaser or resale of animals, but all purchasers who ask for payment of freight by the Department of Agricultuae must understand that the animal or animals upon which the is so paid, shall not be sold out of the Province within five years and during that time shall be annually bred, in the case of mares, to Clydesdale Stallions whenever practicable;

Sgd.,

WM. MEHAREY,
Russell, Ont., Importer.

Approved

W. W. HUBBARD
For the Department of Agriculture.

Fredericton, N. B., Oct. 18th, 1909.

Ewe lamb, 1 and 2, Albert Boswell; 3, S. L. Boswell.
Pen, 1 ram, 2 ewes, 2 ewe lambs, 1, Albert Boswell; 2, L. S. Boswell.
Pen, 1 ram lamb and 3 ewe lambs, 1, Albert Boswell; 2, Retson Bros.

CLASS 29.—COTSWOLDS.

Ram, 2 shears and over, 1, W. H Corning; 2, H. H. Churchill.
Ram, shearling, 1, H. H. Churchill; 2, H. W. Corning.
Ram lamb, 1, H. W. Corning; 2, H. H. Churchill.
Ewe, 2 shears and over, 1, H. H. Churchill; 2 and 3, H. W. Corning.
Ewe, shearling, 1 and 2, H. W. Corning 3, H. H. Churchill.
Ewe lamb, 1 and 2, H. W. Corning; 3, H. H. Churchill.
Pen, 1 ram, 2 ewes, 2 ewe lambs, 1, H. W. Corning; 2, H. H. Churchill.
Pen, 1 ram lamb and 3 ewe lambs, 1, H. W. Corning.

CLASS 30.—LINCOLNS.

Ram, 2 shears and over, 1, Albert Boswell, Jr.; 2, Geo. L. Boswell.
Ram, shearling, 1, Albert Boswell; 2 and 3, Chas. Symes
Ram lamb, 1 and 3, Albert Boswell; 2, Geo. L. Boswell.
Ewe, 2 shears and over, 1, Albert Boswell, Jr.; 2, Geo. L. Boswell; 3, Albert Boswell.
Ewe, shearling, 1, Albert Boswell, Jr.; 2, Chas. Symes; 3, Geo. L. Boswell.
Ewe lamb, 1 and 3, Albert Boswell, Jr; 2, Geo. L. Boswell.
Pen, 1 ram, 2 ewes, 2 ewe lambs, 1, Albert Boswell, Jr.; 2, Geo. L. Boswell.
Pen, 1 ram lamb and 3 ewe lambs, 1, Albert Boswell, Jr.; 2, Geo. L. Boswell.

CLASS 31.—SHROPSHIRES.

Ram, 2 shears and over, 1, Geo. L. Boswell; 2 and 3, Logan Bros.
Ram, shearling, 1, Geo. L. Boswell; 2 and 3, Logan Bros.
Ram lamb, 1, Geo. L. Boswell; 2 and 3, Logan Bros.
Ewe, 2 shears and over, 1 and 3, Logan Bros.; 2, Geo. L. Boswell.
Ewe, shearling, 1 and 3, Logan Bros.; 2, Geo. L. Boswell.
Ewe lamb, 1, Logan Bros.; 2 and 3, Geo. L. Boswell.
Pen, 1 ram, 2 ewes, 2 ewe lambs, 1, Logan Bros.; 2, Geo. L. Boswell.
Pen, 1 ram lamb and 3 ewe lambs, 1, Geo. L. Boswell; 2, Logan Bros.

CLASS 32.—SOUTH DOWNS.

Ram, 2 shears and over, 1, Cephas Nunn; 2, J. E. Baker & Sons.
Ram, shearling, 1, J. E. Baker & Sons
Ram lamb, 1, Cephas Nunn; 2, J. E. Baker & Sons.
Ewe, 2 shears and over, 1 and 2, Cephas Nunn; 3, J. E. Baker & Sons.
Ewe, shearling, 1 and 2, Cephas Nunn; 3, J. E. Baker & Sons.
Ewe lamb, 1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.
Pen, 1 ram, 2 ewes, 2 ewe lambs, 1, Cephas Nunn; 2, J. E. Baker & Sons.
Pen, 1 ram lamb and 3 ewe lambs, 1, Cephas Nunn.

CLASS 33.—OXFORD DOWNS.

Ram, 2 shears and over, 1, J. E. Baker & Sons.
Ram, shearling, 1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.
Ram lamb, 1, 2 and 3, J. E. Baker & Sons.
Ewe, 2 shears and over, 1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.
Ewe, shearling, 1, Burder Goodwin; 2 and 3, J. E. Baker & Sons.
Ewe lamb, 1 and 3, J. E. Baker & Sons; 2, Burder Goodwin.
Pen, 1 ram, 2 ewes and 2 ewe lambs, 1, J. E. Baker & Sons 2, Burder Goodwin.
Pen, 1 ram lamb and 3 ewe lambs, 1, J. E. Baker & Sons; 2, Burder Goodwin

AMERICAN OXFORD DOWN RECORD ASSOCIATION SPECIALS.

Best yearling ram, 1 and 2, J. E. Baker & Sons.
Best yearling ewe, 1, Burder Goodwin; 2, J. E. Baker & Sons.
Best pen of 4 lambs (either sex), 1, J. E. Baker & Sons; 2, Burder Goodwin.

CLASS 34.—HAMPSHIRE DOWNS.

Ram, 2 shears and over, 1, Cephas Nunn.
Ram, shearling, 1, Oliver Nunn.
Ram lamb, 1, Cephas Nunn.
Ewe, 2 shears and over, 1 and 2, Cephas Nunn; 3, Oliver Nunn.
Ewe, shearling, 1 and 2, Cephas Nunn; 3, Oliver Nunn.
Ewe lamb, 1 and 2, Cephas Nunn; 3, Oliver Nunn.
Pen, 1 ram, 2 ewes and 2 ewe lambs, 1, Cephas Nunn; 2, Oliver Nunn.
Pen, 1 ram lamb and 3 ewe lambs, 1, Cephas Nunn.

CLASS 35.—CHEVIOTS.

Ram, 2 shears and over, 1, Henry Leithead; 2 and 3, Chas Symes.
Ram, shearling 1, Henry Leithead.
Ram lamb, 1, Henry Leithead; 2 and 3, Chas. Symes.
Ewe, 2 shears and over, 1, 2 and 3, Chas. Symes.
Ewe, shearling, 1, Henry Leithead; 2 and 3 Chas. Symes.
Ewe lamb, 1 and 2, Henry Leithead; 3, Chas. Symes.
Pen, 1 ram, 2 ewes and 2 ewe lambs, 1, Henry Leithead; 2, Chas. Symes.
Pen, 1 ram lamb and 3 ewe lambs, 1, Henry Leithead; 2, Chas. Symes.

CLASS 36.—DORSETS.

Ram, shearling, 1, H. W. Corning.
Ewe, 2 shears and over, 1, H. W. Corning
Ewe, shearling, 1, H. W. Corning.
Ewe lamb, H. W. Corning.
Pen, 1 ram, 2 ewes and 2 ewe lambs, 1, H. W. Corning.

CLASS 38.—GRADES OR CROSS (LONG WOOL.)

Ewe, 2 shears and over, 1, S. L. Boswell; 2, Albert Boswell, Jr.; 3, H. W. Corning.

EATON'S

HANDSOMELY ILLUSTRATED

BIG FALL AND WINTER CATALOGUE

THE LARGEST RETAIL MAIL ORDER BOOK YET ISSUED IN CANADA

VALUES INTENDED FOR YOU

READ HOW TO GET THEM

WE CAN SAVE YOU MONEY, on not only your luxuries, but your necessaries of life as well. Why not give us a chance to demonstrate it? It is easy enough, simple enough and costs you nothing. Send for our Fall and Winter Catalogue to-day. You will get it absolutely FREE and postpaid, as fast as the mails can carry it. Look it over carefully—observe the illustrations—read the descriptions—and last but not least note the prices.

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THE T. EATON Co. LIMITED
TORONTO CANADA

Satisfaction Guaranteed or Your Money Refunded

Ewe, shearling, 1, S. L. Boswell; 2, H. W. Corning; 3, Albert Boswell, Jr.
Ewe, lamb, 1, S. L. Boswell; 2, Albert Boswell, Jr.; 3, H. W. Corning.
Pen 2 ewes, 2 shearlings and 2 ewe lambs, 1, Albert Boswell, Jr.; 2, H. W. Corning.

CLASS 39.—GRADES OR CROSS (MEDIUM WOOL).

Ewe, 2 shears and over, 1, Logan Bros.
Ewe, shearling, 1 and 2, Logan Bros; 3, Cephas Nunn.
Ewe, lamb, 1 and 2, Albert Boswell; 3, Logan Bros.
Pen, 2 ewes, 2 shearlings and 2 ewe lambs, 1, Logan Bros.

CLASS 40.—FAT SHEEP (LONG WOOL)

Wether shearlings, 1, Albert Boswell, Jr. 2, S L Boswell.
Weather, lambs, 1, Albert Boswell, Jr.; 2, S. L. Boswell.
Ewes, 1, Albert Boswell, Jr.; 2, S. L. Boswell.

CLASS 41.—(MEDIUM WOOL.

Weather, shearling, 1 and 2, Logan Bros. Cephas Nunn.

CANCER

R. D. EVANS, Discoverer of the famous EVANS' CANCER CURE desires all who suffer with Cancer to write him. Two days treatment will cure external or internal Cancer. Write R. D. EVANS, BRANDON, Manitoba, Canada.

Weather lambs, 1, Logan Bros.
Ewes, 1, Logan Bros.; 2, Geo. L. Boswell, 3, Logan Bros.

SWINE.

CLASS 42.—BERKSHIRES.

Boar, over 3 months and under 6 months, 1, A. J. Nicholson, 2, Roper Sros.

CLASS 43.—YORKSHIRES.

Boar, over 2 years, 1, W. A. Churchill; 2, A. J. Nicholson; 3, C. J. Keeler,

Boar, over 1 year and under 2 years, 1, Roper Bros; 2, A. J. Nicholson; 3, Roper Bros.
Boar, over 6 months and under 1 year, 1, C. J. Keeler; 2, A. J. Nicholson.
Boar, over 3 months and under 6 months 1, W. A Churchill; 2, A J. Nicholson.
Sow, over 2 years, 1, C. J. Keeler.
Sow, over 1 year and under 2 years, 1, Roper Bros; 2, W. A Churchill; 3, A. J. Nicholson.
Sow, over 6 months and under 1 year, 1, W. A. Churchill; 2, Roper Bros.; 3, C. J. Keeler.

NO REST FOR TERRIBLE ITCH.

Till Oil of Wintergreen Compound Make His Skin as Pure as Ever.

Mr. James Lullock, of the Iron Bridge, Ont., considers the D. D. D. Prescription of oil of wintergreen, thymol, glycerine, etc., a wonderful cure for skin troubles. He has good reason to think so, too, according to his letter of Mar. 27, 1909.

"I have suffered for years," he says, with eczema, and now through using two bottles of your wonderful cure, my skin is as pure as it ever was.

My face was so bad I could not see. I could not sleep. I could not rest at all for the terrible itch.

Thanks to your wonderful medicine I am cured."

As eczema is a germ disease, and as the germs are right in the skin, blood medicines will not cure it. The only effective way is to treat the itch where the itch is. D. D. D. Prescription penetrates the pores of the skin, kills the germ which causes the eczema, gives instant relief from the awful itch and permanently cures.

For free sample bottle of D. D. D. prescription write to the D. D. D. Laboratory Department F. M., 23 Jordan St., Toronto.

For sale by all druggists.

Sow, over 3 months and under 6 months, 1, W. A. Churchill; 2, Roper Bros.; 3, C. J. Keeler.
Breeding sow with litter, 1, C. J. Keeler, 2, W. A. Churchill.
Herd, boar and 3 females, any age, 1, W. A. Churchill; 2, Roper Bros.

CLASS 44—WHITE CHESTERS.

Boar, over 2 years 1, A. J. Nicholson.
Boar, over 1 year and under 2 years, 1, Vernon C. Griffin.
Sow, over two years, 1, W. A. Bickers.
Sow, over 1 year and under 2, 1, A. J. Nicholson.
Herd, 1, A. J. Nicholson.

CLASS 45.—POLAND CHINAS.

All the prizes in this cla s were captured by Chas. Symes without competition.

CLASS 46.—TAMWORTHS.

All the prizes in this class were captured by Roper Bros. without competition.

CLASS 47—DUROC JERSEYS.

Boar, over 1 year and under 2 years, 1, A. J. Nicholson.
Boar over 6 months and under 1 year, 1, J. E. Baker & Sons.
Sow, over two years, 1, J. E. Baker & Sons.
Sow over 1 year and under 2 years, 1, Geo. Symes; 2, J. E. Baker & Sons.
Sow over 6 months and under 1 year, 1. J. E. Baker & Sons.
Herd, 1, J. E. Baker & Sons

CLASS 48.—GRADES.

Sow over 2 years, 1 and 2, C. J. Keeler.
Sow 1 year and under 2 years, 1 and 2, C. J. Keeler; 3, A. J. Nicholson.
Sow over 6 months and under 1 year, 1 and 2, C. J. Keeler.
Sow over 3 months and under 6 months, 1, H. Leithead, 2, I. L. Hartlen; 3, A. J. Nicholson.
Breeding sow with litter, 1 and 2, C. J Keeler; 3, A. J. Nicholson.

CLASS 49.—FAT PIGS.

Fat hog, 1, C. J. Keeler; 2, I. L. Hartlen.
Spring pig, 1, C. J. Keeler; 2, A. J. Nicholson; 3, I. L. Hartlen.

CLASS 50.—BACON HOGS.

2 purebred hogs, 1 and 2, Roper Bros.
2 grade hogs, 1 and 2, I. L. Hartlen.

POULTRY.

Note:— c. cock; h, hen; r, cockerel; p, pullet.

Light Brahmas, Eason C. Griffin, 1 c, 1 h, 1 r, 1 p; Henry Leithead, 2 c, 2 h.
Dark Brahmas, Bottomly & Tucker, 1 r, 1, 2 p; Henry Leithead, 2 r.
Buff Cochins, Wm. Dalton, 1 c, 1 h.
Partridge Cochins, Henry Leithead, 1 c, J. R. Gilford, 2c; Thos. McCarrod, 1 h; W. Cochran, 2 h.
Barred Plymouth Rocks, Glen View Poultry yards, 1 c, 2, 5, 6 r, 2, 4, 5, p; Craig Bros, 2 c, 1 h, 1, 3 r, 6 p; A. J. Keddy, 2 h; Fernie Pushie, 4 r, 2, 3 p.
White Plymouth Rocks, Henry Leithead, 1c, 1h; Albert Boswell, Jr., 2 c, 2 h, 1 and 2 r, 1 and 2 p.
Buff Plymouth Rocks, Fernie Pushie, 1 h, 1 r, 1 p.
Black Langshans, F. Tucker, 1 c, 2 r, 1 p; Mrs. Wm. Mitchell, 1 h, 1 r, 2 p; Bottomly & Tucker, 2 c, 2 h.
Silver Wyandottes, Bottomly & Tucker, 1 c, 2 h, 2 r; J. D. Fraser, 2 c, 1 h, 1 r, 1 p; F. Tucker, 2 p.
Golden Wyandottes, J. R. Gilford, 1 c, 1, 2 h; Bottomly & Tucker, 1 r, 1 p; John Feetham, 2 r, 1, p.
White Wyandottes, Glen View Poultry yards, 1 c, 1 h; C. J. Keeler, 2 c, 2, h; Henry Leithead, 1r, 2 p; Aaron Morash, 1 p; Matthew McPherson, 2 r.
Buff Wyandottes, Glen View Poultry yards, 1 c, 1, 2 h, 1, 2 r, 1, 2p.
A. V. O. Wyandottes, H. L. Fenerty, 1, 2 c, 1, 2 h; W. H. Henry, 1 and 2 r, 1, 2 p.
Black Javas, W H. Henry, 1 h, 1, 2 r, 1, 2 p,

WINDSOR BUTTER SALT
WINDSOR BUTTER SALT
Used by all Prize Winners
The Farmer's Daughter
knows how important it is to use the best salt in butter making.
She knows that WINDSOR BUTTER SALT dissolves quickly and completely, and works in evenly.
She knows that WINDSOR BUTTER SALT makes the richest, creamiest Butter—improves the flavor—helps to make the butter keep better.
At all the big fairs last year, practically all of the prize winners used
Windsor Butter Salt

Agricultural College, Truro, Nova Scotia.

Next Session of Full Course Begins NOVEMBER 2, 1909.

Next Short Course for Farmers and Farmers' Sons begins JANUARY, 4 1910.

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies begins JANUARY 4, 1910.

Three hundred [300] students enrolled in the various classes during the past session. A large increase is expected next session.

Tuition FREE to all students from the Maritime Provinces.

A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and, at the same time, in English, Mathematics, Book-Keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had a poor opportunity to acquire a school education and now wish to improve their knowledge in all lines.

Students completing the two yeer course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges.

For full particulars apply to,—

M. CUMMING, B. A., B. S. A., - Principal Agricultural College, - Truro, N. S.

Silver Spangled Hamburgs, P. C. Brown, 1 c, 1 h, 1, 2 r, 1, 2 p; B. F. Pearson, 2 c, 2 h.
Hamburgs Silver Pencilled, Thos. D. Handrahan, 1 r, 1 p.
Hamburgs, Golden Penciilled, L. A. Haszard, 1 r, 1 p.
Silver Grey Dorkings, 1 c, 1h, 1 r, 1 and 2p.
White Faced Spanish, A. A. Paolie, 1 c, 1 h, 1 r, 1 p; Wm. Dalton, 2 r, 2 p.
White Leghorns, Henry Leithead, 1 c, 1 h; Mrs. W. J. Richards, 2 h.
S. C. Brown Leghorns, Glen View Poultry yards, 1, 2 c, 1 h, 1, 2 r, 1 p; C. H. Wisner, 2h, 2 p.
Buff Leghorns, A. T. Parker, 1, 2 r, 1, 2 p.
R. C. Brown Leghorns, E. H. Hall, 1 c, 2 h, 1 r, 1 p; John Suckling, 1 h.
A. O. V. Leghorns, Thompson & Connors, 1h.
Black Minorcas, John Feetham, 1 c, 2 h, 2 p; D. A. C. Foster, 2 r, 1 p; C. P. Thorne, 2 c, 1 h, 1 r.
R. C. Black Minorcas, Mrs. L. A. Goudge, 1 h, 1 r, 1 p; J. D Fraser, 2 r, 2 p.
Black Brested Red Games, Wm. Dalton, 1c, 1 h; Wm. Gilfoy, 1, 2 p.
Brown Brested Red Games, John Bremner, 1 r; Wm. Gilfoy, 2 r, 1 p.
Red Pile Games, Mrs. Jas. Livingston, 1 r 1 p; Lewis Shortell, 2 r, 2 p; Thos. Shortell, 1 h; Geo. Shurgess, 2 h.
Golden or Silver Duckeving Games, Andrew White, 1 c, 1 h.
Indian Games, B. F. Pearson, 1, 2 h, 1, 2 r, 2 p; William Robertson, 1 p.
Pit Games, John A. Mallay, 1c, 1 h; Arthur Gilfoy, 2 c, 2 h; H. Patterson, 1 r, 2 p; J. Moakler, 2 r, 1 p.
Black Brested Red Game Bantams, Wm. Dalton, 1 c, 2 h; Harry Purcell, 2 c; B. F. Pearson, 1 h.
Golden Seabright Bantams, Thos, D. Handeahan, 1 h.
Silver Seabright Bantams, L. A. Haszard, 1 c, 1 h.
Black Rose Comb Bantams, L. A. Haszard, 2 r, 1 p; Thompson and Connors, 1 r 2 p.
Buff Cochin Bantams, Thompson & Connors, 1 c, 1 h; W. Baker, 2 c, 1 r, 1 p; Harry Butler, 2 h; A. J. Keddy, 2 r, 2 p.
Black and White Cochin bantams Bottomly & Tucker, 1 h; Thompson & Connors, 1, 2 r, 1 p.
S C. Rhode Island Reds, Glen View Poultry yards, 1 c, 2 p; Jos. Edwards, 2 c, 2 r; Thos. S. Kyle, 1 h, 1 r, 1 p; James Osborne, 2 h
R. C. Rhode Island Reds, W. H. Henry, 1 c, 1, 2 h, 1 r, 1 p; Aaron Morash, 2 c, 2 p, James W. Osborne, 2 r.
Buff Orpingtons, Richard Pugh, 1 c; Wm. Robertson 2 c, 1 h, 1 r, 2 p; Thos. S. Kyle, 2 h; L. A. Haszard, 2 r, 1 p.
White Orpingtons, Inglis A. Laurie, 1 c; C. H. Wisener, 1 h, 1 r, 1 p; E. E. Parsons, 2 c, 2 h, 2 r, 2 p.
Black Orpingtons, Thompson & Connors, 1 c, 2 h, 2 r, 1 p; C H. Wisener, 2 c; E. H. Parsons, 1h; Wm. Robertson, 1 r, 2 p.

CLASS 53—BREEDING PENS.

Barred Plymouth Rocks, 1, Craig Bros.; 2, Glen View Poultry yards; 3, Fernie Pushie.
Buff Plymouth Rocks, 1, R. M Houseman.
White Plymouth Rocks 1, Albert Boswell, Jr.
Black Langshan, 1, Bottomly & Tucker; 2, Mrs. Wm. Mitchell; 3, F. Tucker.
White Wyandottes, 1 and 2, A. J. Keddy; 3, Glen View Poultry yards.
White Leghorns, 1, Glen View Poultry yards.
Black Minorcas, 1, John Feetham.
Games, 1, B. F. Pearson; 2, Edward Walsh, 3, J. Moakler.
Buff Orpingtons, 1, Wm. Robertson.
Rhode Island Reds, 1, Jos. Edwards; 2, Thos. S. Kyle; 3, A. J. Keddy.
A. O. V. pen, 1, Bottomly & Tucker; 2, Thos. McCarron.

CLASS 54.—TURKEYS, GEESE AND DUCKS.

Bronze turkeys, 1, Henry Leithead; 2, Albert Boswell, Jr.; 3, Victor W. Aylward
Bronze turkeys of 1909, 1, Thos. W. Aylward; 2. Henry Leithead; 3, Wm. Sharp.
White turkeys of 1909, 1, Thos. W. Aylward, 2, Charles E. Aylward.
Tolouse geese, 1, Wm. Sharp; 2, Albert Boswell; 3, John W Richard.
Tolouse geese of 1909, 1, Campbell McNeil; 2, John W. Richard; 3, Wm. Sharp.
Bremen or Embden Geese, 1, J. E. Baker & Sons; 2 and 3, Albert Boswell, Jr.
Bremen or Embden Geese of 1909, 1, Albert Boswell, Jr; 2, J. E. Baker & Sons.
A. O. V. geese, 1, Albert Boswell, Jr.; 2, Burder Goodwin; 3, Chas. Symes.
A. O. V. geese of 1909, 1, Burder Goodwin; 2, Albert Boswell, Jr.; 3, Mrs. J. D. Settle.
Ronen ducks, 1, Henry Leithead; 2, Henry Leithead, 3, Wm. Sharp.
Ronen ducks of 1909, 1, Henry Leithead; 2, Roy Dill; 3, Chas, D. Dill.
Pekin ducks, 1, A. J. Keddy; 2, J, T. McKenzie; 3, Inglis A Laurier.
Pekin ducks of 1909, 1, Inglis A. Laurie 2,; Albert Boswell, Jr ; 3, B. F Pearson.
A. O. V. ducks, 1, Chas. Symes.
A. O. V. ducks of 1909, 1, Chas. Symes; 2, Geo. Symes.

DAIRY PRODUCTS.

CLASS 57.—BUTTER AND CHEESE.

Butter—Tub, box or firkin, not less than 50

(Continued on page 44.)

Are you buying your Field and Garden Seeds for 1910, through S. P. GOUDEY, Yarmouth? Read his announcement to Farmers' Associations and Agr. Societies. The best of Seeds suplied at carload prices. Twenty years experience.

POTATOES.

It never pays to rush the fall market in potatoes, especially when Cold Storage is at hand for overcoming the ordinary shrinkage in store. We can quote on straight storage or on bulk receipts, barreled, stored, stowed and delivered to steamer or car, as ordered. Write for our proposition.

The New Brunswick Cold Storage (Limited), 672-690 Main St. ST. JOHN, N. B.

IMPORTANT ANNOUNCEMENT

The subscriber begs to announce that he is in a position to import and supply **FRESH FIELD and GARDEN SEEDS** to any Agricultural Society or Farmers' Association in the maritime provinces, at a small commission.

We import seeds by the carload and have supplied a number of Farmers' Associations for years, giving the best quality of seeds, at carload prices, our commission being only 5 per cent.

Will the Secretaries of Farmers' Associations and Agricultural Societies kindly bring this matter up, at their next meeting and write us for particulars S. P. GOUDEY, SEEDSMAN, YARMOUTH, N. S.

Help for weak aching backs.

Few people reach old age entirely free of Kidney Trouble. That is why so many men and women of 50 and 60 suffer tortures with lame back, aching hands, arms and legs, Rheumatism, irritated bladder and frequent passages at night.

GIN PILLS mean a healthy, hearty old age. GIN PILLS keep the kidneys well and strong. GIN PILLS neutralize Uric Acid, which causes the pain, and soothe and heal the irritated Kidneys.

Here is What Gin Pills Did for One Man, 84 Years Old.

"I am 84, and for 20 years I was in misery from a Lame Back. I tried nearly all the advertised remedies, and household recipes, even sending abroad for medicines, but received no relief. Some months ago, seeing GIN PILLS advertised, I purchased a box from W. H. Stepler, the druggist. The relief experienced after taking one box was so great that I knew that I had found the right remedy at last. I used two more boxes of GIN PILLS, which completed the cure. For twenty years I was compelled to walk with a cane, but now I have laid the cane aside and am as spry on my feet as a cat."

SAMUEL MARTIN, Strathroy, Ont.

Don't run the risk of neglecting your Kidneys. Aching back, swollen hands and feet, sharp, shooting pains through the back and hips, are not "signs of old age." They are signs of weak, irritated Kidneys. They are also signs that you need GIN PILLS.

We have such faith in the curative qualities of GIN PILLS that we will let you try them before you buy them. Write for a sample, which will be sent you absolutely free by return mail.

GIN PILLS are guaranteed to relieve and cure or your money will be promptly refunded. Sold by all druggists and dealers at 50c a box—6 for $2.50.

Dept. M. F. The National Drug & Chemical Co., Ltd., Toronto.

A Strictly Canadian Separator.

It affords us pleasure to draw the attention of the readers of the MARITIME FARMER to the Magnet Cream Separator ad. in this issue. The Magnet is manufactured by the Petrie Mfg. Co., Limited, and is the only cream separator of Canadian origin. There is a great sameness in most separators but the MAGNET is built different than the others. In it you find the bowl supported at both ends, this plan the manufacturers claim prevents it getting out of balance. Its bowl is large with the skimmer in one piece, and is constructed with a view to taking all the foreign matter out of the cream, leaving it perfectly pure. This separator is built on the Spur and Square gear principle and this, together with its original three ball race, makes it easy to operate. The makers claim a boy or girl can turn any MAGNET. The MAGNET has now been on the market for eleven years and its sale has been so large that the makers have found it necessary to increase the factory accommodation four times. The factory (an illustration which accompanies this note) is located in Hamilton, Ont. The main building is 326x90 feet, which, together with three annexes, gives a floor space of nearly one acre, which is entirely devoted to the manufacture of the MAGNET. Warehouse trackage has been secured by the company in nearly every province on which to erect their office buildings. At Regina a fine warehouse was built this year, and the others will be built during 1910. This permanent location in their own warehouse property is a guarantee that all customers will be properly looked after. The company is strictly Canadian and has over half a million dollars in assets. We wish them continued success.

A Fountain Pen for $1.00

This Pen point is solid gold 14k, is tipped with iridum, the hardest metal known, the same as found on the highest priced pens. The pen is the same size that other makers charge $4.00 for. The cut is exact size of pen and holder. We are making a specialty of this pen. It will be mailed to you for a **one dollar bill.** If not satisfactory your money will be refunded. Each pen is fully guaranteed. We refer you to the publishers of this paper.

GEORGE SUFFREN, JR., - - - - SUSSEX, N. B.

A Windsor Lady' Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, were caused by weakness peculiar to our sex. You can continue treatment at home at a cost of abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—Q R. S. T.

Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS.
Box 596 GEORGETOWN Ontario

GOES LIKE SIXTY
SELLS LIKE SIXTY
SELLS for $65
GILSON Gasoline ENGINE
For Pumping, Cream Separators, Churns, Washing Machines, etc. Free Trial. 1 to 25 Horse Power. Ask for Catalog
GILSON MFG. CO. 217 York St., Guelph, Ont.

SAVE MONEY.

Buy direct from the producer and save the middlemen's profit. We are large growers of Celery, Cabbage, Beets, Carrots, Parsnips etc. We ship to all the Maritime Provinces and have supplied critical buyers in Montreal and Toronto with our celery and other vegetables. They say our celery down by the sea has a flavor not to be had elsewhere.

J. J. GAY & SON,
Charlottetown - P. E. I

F. A. KIERSTEAD,

Commission Merchant,
City Market - St. John, N. B.
Residence, Albert St., Sussex, N. B. Phone 131
Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS
MUMFORD'S BUILDING, ARGYLE ST.,
Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application TELEPHONE 1905.

Farm Problems.

Bloody Milk

F. D., Berwick, N. S.—I have a nice three-year old heifer that calved last October. She is due to calf again in January. She gave bloody milk out of one teat for a few days some time ago. She then got well but a few days ago when I tried to milk her I could not get anything out of this particular teat, until I had manipulated it to some extent, when I finally squeezed out a clot of blood. Then the milk came all right but it was so bloody that it was unfit for anything. She still continues to give bloody milk. What is the cause? What can I do to alleviate the trouble?

ANS.—We occasionally notice a cow giving bloody milk from one or more quarters without apparent cause and without apparent alteration or irritation of the udder. It is not infrequent to notice this occur frequently in the same animal. In such cases it is due to a gongenital weakness of the blood vessels of the udder and while it may be successfully treated its recurrence cannot be prevented; hence an animal subjected to this condition is not valuable as a milker and should be fitted for the the block. Neither is she valuable as a breeder of milkers, as she will probably transmit to her progeny her own weakness. Your heifer may have been injured accidentally, in which case she will get well without treatment. Feed lightly on dry food to check the secretion of milk. Bathe the affected quarter long and often with cold water, and give an ounce of tincture of iron in a pint of cold water as a drench three times daily until blood ceases to flow. Milk regularly. do not allow her to stand in a draughty place or wade in cold water.

How to Train a Collie.

An experienced sheepman and collie owner presents the following excellent advice regarding the training of a collie in a recent issue of the American Sheep Breeder. The suggestions are good and may well be followed by all who attempt the making of a useful dog.

In order to secure the best results with dogs as workers they should be broken by the one who is to handle them. I have one bitch that I have offered to work in competition with any dog in our country, and yet I have never seen her do reasonably good work for anyone else. For some people she will not go a rod. In the first place I would like to know the kennels a puppy was from and would want it when from two or four months old. It should be fed from the hands of its master and should learn to love home.

Never kick or strike a collie. Scold him or pull his ear for punishment. And never call him to you for this. Make him "down" where he is and go to him. If you call him to you, he is liable to suspect you and make a sulky dog. His first lesson should be to "come here." Use it whenever you call to feed him, and he will get into the habit of coming when called. Next teach him to "down" by saying "down" and pressing down with the hand. Be very thorough with this lesson and make him keep his position while you go any distance from him and stay any length of time. He should be taken among the stock from the first and learn to like them.

If you keep him constantly with you he will soon try to help you whatever he sees you doing. By petting and encouraging him when he does right and scolding when he does not please you,

DO not be misled. The only kind of sound-reproducing machine that is perfect is the one that Edison invented and the one that Edison makes.

What you want is an Edison Phonograph

It is the one with the smooth and perfect sapphire point, that doesn't require changing with each record and that doesn't scratch—two points alone that should influence your decision.

Only in the Edison do you find the music-reproducing idea at its best.

Don't take our word for it. Compare the Edison Phonograph with all other instruments side by side, on the same music, if possible, and then you will know better than we can tell you.

Edison Phonographs are sold everywhere in Canada at the same price, $16.50 to $162.50.
Standard Records, 40c. Amberol Records (twice as long), 65c. Grand Opera Records, 85c.
There are Edison dealers everywhere. Go to the nearest and hear the Edison Phonograph play both Edison Standard and Amberol Records. Get complete catalogs from your dealer or from us.

NATIONAL PHONOGRAPH COMPANY
100 Lakeside Ave., Orange, N. J., U. S. A.

"Prince Crawford"
is the most economical range built to-day.
The flues are constructed so that the smoke and heated gases have to travel twice around the oven. All the heat intended for cooking is retained in the oven and cannot escape up the chimney
The "Prince Crawford" requires only one-half the fuel of ordinary stoves.
The tops are polished like glass before being blacked. This will make them easy to keep clean and in perfect order.
All nickeled parts are easily detachable for cleaning. The "Prince Crawford" is made without elevated closet or without reservoir if so desired. We furnish any nickeling you may wish. Ask for illustrated catalogue.
A. BELANGER, Montmagny, Que.
20

FOURTEEN POUNDS IN TWO MONTHS

Remarkable Gain Made by Terra Nova, Cape Breton, Woman

"Father Morriscy's No. 10" (Lung Tonic) has wrought some wonderful cures. Here is a typical case, as described by the patient herself:

"During the Fall of 1906 I contracted a severe cold, which settled upon my lungs. After being treated by two physicians of high standing my condition was not any better, but in fact getting worse. My friends began to have serious doubts about my recovery.

I had heard of Father Morriscy's remarkable career as a medical adviser, and wrote to him explaining my case. In a few days I received an encouraging letter from him, and some of his "Lung Tonic," and immediately I began to improve, gaining fourteen pounds in two months.

I strongly recommend his "Lung Tonic" for Colds and any form of Lung Disease."

Yours sincerely,
ANNIE McDONALD.

TERRA NOVA, CAPE BRETON CO.

Trial size, 25c. a bottle. Regular size, 50c. Father Morriscy Medicine Co., Ltd., Chatham, N.B. 10

The Song of the Woodpecker.

Running along with a ceaseless song,
The Woodpecker runs the whole day long;
A little gasoline, some water and air
Is all he wants for his bill of fare.

II.

He never complains of a pain or ache,
But labors along for his master's sake;
He will saw your wood and grind your feed,
And thresh your wheat of chaff and weeds.

III.

He will pump your water and run your lathes,
You will count the money he always saves;
He wants no pay, this gasoline knight,
The Woodpecker works because he is right.

IV.

"The music will be furnished by the exhaust,
Free literature, prices and all information,
By the L. M. Trask Co.,
29 Dock St., St. John, N. B."

Southport, P. E. I., Oct. 27th, 1908.
L. M. TRASK, ESQ., St. John, N. B.

DEAR SIR:—I received receipt from you for payment of engine. I have used your engine on different kinds of work with perfect satisfaction. We had a careful scrutiny over different engines and I am satisfied we made a wise choice. I was doubtful for fear I did wrong in not taking your 5 H. P., but your 3½ H. P. has lots of power for me.

Yours, with respect,
P. CORNISH.

The L. M. TRASK CO.,
29 Dock St.,
ST. JOHN, N. B.

FARM FOR SALE
Stock, Tools and Crops.

Horse, 5 cows, poultry, all wagons, carts, harnesses, machinery, tools, sleds, sleighs, corn, vegetables, hay and wood for the stove included as affairs must be settled at once; 80 acres, cottage house, 50 ft. barn, 2 poultry houses, bldgs, good repair, pure water; 1½ miles from village, cash markets; $2,000 is the low price, ⅓ cash, balance easy terms; all details and complete list personal property page 124 of this and other Maine farm bargains; take possession and be comfortable for the winter. "Strout's New Farm Buyers' Guide No. 28" Just out, copy free. Dept. 2612. E. A. STROUT, Kent's Hill, Maine.

he will soon do as you bid him. But remember "licking" spoils more collies than all the other things combined. Never try to teach but one thing at a time and have that well learned before you try to make him learn another. Patience and perseverance will make a good work dog of any bright and well-bred dog.

Floor for Horse Stable

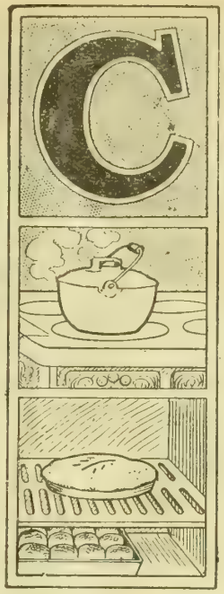
The best floor I have ever seen is one we use in our stable. It is made of clay and gravel, two parts to one of gravel. It is cool, cheap, easy for the horses feet, and will last indefinitely.

To make it, procure the thickest, toughest clay possible; we use blue clay, and clean, rather coarse gravel. Mix together in the proportions named, and wet and pound up until a thick mud, put in not less than six inches thick, and pound or puddle until all the air is worked out, then leave until it begins to dry so as to be hard enough to ram down with a rammar, made of the end of a log, six or eight inches in diameter, and 18 inches long with a handle.

Ram in every day or two until dry and firm. It will then be nearly as hard as cement, but will be more elastic than a plan, and the feet will not dry up when standing on it, as they will when on plank. If well bedded, the horses will not paw holes into it, but if they do the holes can be quickly filled with some of the same mixture; and that rammed down, when the floor will be as good as new.—J. S. WOODWARD.

Fertility in Sheep.

A good many farmers disapprove of the old adage about breeding from twins, holding the opinion that one lamb is as many as a ewe can rear well; but the yearly-increasing necessity to obtain a greater return from their land will compel them to change their practice. The production of twins is not a matter of chance; it is a well-established law of herdity. Sheep breeders who have received the strongest of their lambs, ram, and ewe, for breeding purposes, disregarding this point, have found their percentage of lambs dwindle until it has fallen below par (there are few flocks without a greater or less number of barren ewes). On the other hand, certain English flock-masters who have made a practice of selecting for their breeding flocks sheep which were twins have thereby cultivated the prolific quality to such a degree that they have a regular lambing of 200 per cent, and their lambs and adult sheep are as profitable as those which were "singles." Thus fecundity has been most successfully developed in some of the Down breeds or varieties, and has no doubt assisted in a great measure to gain them the great popularity as profit-earners which they enjoy amongst sheep farmers. Along with the proclivity for "winning," there has been also developed the ability of the ewe to rear her twins well—to convert the food which is provided for her into abundant milk for her lambs. The farmer, too, has acted his part in the scheme of evolution, by discovering and cultivating the crops which will be of the greatest value to his ewes and lambs. In a word, the system of sheep-breeding and sheep-farming has in regard to several breeds made a great advance in the direction of larger returns, and there is evidence that owners of flocks of some of the white-faced breeds are aiming at the same object. Border Leicester breeders, it is pleasing to know, are included in the latter category, and an instance that the quality of this most useful breed is not suffering from the process is found in the 280-guinea ram which Mr. Thos. Little, of Ngapara, bought in Scotland a year ago, and its twin brother, which also came to New Zealand, after winning the highest honors at home. The present owners of those sheep deserve to reap equal success with the breeders, and with the extending use of the Border Leicester in farm flocks there may grow up a more prolific race of sheep than is at present general. On hill country, however, at present, one lamb is as many as a ewe can do justice to, the feed in such situations being as a rule somewhat sparse, but improvement of hill pastures is one of the most important points in the development of the pastoral resources of the Dominion, and as it is attained so can the fertility of the flocks be increased.—Otago Witness.



Cooks on top of the stove, bakes in oven at same time

You can cook over every pot-hole and bake in Pandora oven at same time—and get perfect results. That's because cooking draft is also baking draft. Flues are so constructed that heat passes directly under every pot-hole and around oven twice before passing up chimney. No wasted heat—instead fuel does double duty, saving Pandora owners both time and money. 19

Would you not like to be a Pandora owner?

McClary's Pandora Range

More bread and Better bread
—And the Reason for it

A STRONG FLOUR can only be made from strong wheat. Manitoba hard wheat is acknowledged the strongest in the world—and that is the kind used for Purity Flour.

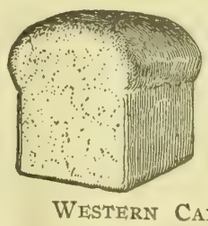
But that's not all. Every grain of this wheat contains both high-grade and low-grade properties. In separating the high-grade parts from the low-grade the Western Canada Flour Mills put the hard wheat through a process so exacting that not a single low-grade part has the remotest chance of getting in with the high-grade.

Of course this special process is more expensive to operate but it means a lot to Purity flour users—that's why we use it.

It means that Purity Flour is made entirely of the highest-grade flour parts of the strongest wheat in the world.

It means a high-class, strong flour and therefore yields "more bread and better bread."

Purity may cost a little more than some flours, but results prove it the cheapest and most economical after all.



PURITY FLOUR

WESTERN CANADA FLOUR MILLS COMPANY, LIMITED
MILLS AT WINNIPEG, GODERICH, BRANDON

RATHER STALE BREAD.

"What! a loaf of bread over 1,800 years old? Nonsense!" Well, my friend, there is no nonsense about it. You can see several of them in the Royal National Museum, at Naples burned black like carbon, or charcoal. They were found in the ruins of Pompeii, a city that was buried by an eruption of hot, fiery ashes from Mount Vesuvius in the year 79. No one could eat this bread, although carbon is the element in our food that promotes heat in the body.

When Indigestion prevails, your food does not nourish you and you have headaches, poor blood, constipation, dizziness, and other ills. Mother Seigel's Syrup, the sure herbal remedy cures all these ills. Mr. Burton Shortliffe, Central Grove, Digby Co., N.S., writes:—"I was troubled with Indigestion for a long time and found no medicine to give such immediate relief as Mother Seigel Syrup. For Indigestion and all Stomach Troubles it is a grand remedy."

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken

Clydesdale Horses.

E. H. Johnson, Greenwich, K. Co., N. S.
C. R. H. Starr & Son, Port Williams, N. S.

Jersey Cattle.

Walter McMonagle, Sussex, N B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F W. C. Nase, Nerepis, Station Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

The S. H. White Co. Ltd., Forest Glen, N.B
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex, N. B.
Syd. J. Goodliffe, Sussex, N. B.
Fred S. Black, Amherst, N. S.

Shorthorn Cattle.

C. R. H. Starr & Son, Port Williams, N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S
E. P. & E. J. Armstrong, Church St., Kings Co N. S.

Herefords

Walter Bennett, Chatham, Ontario.

Oxford Down

Fred S. Black, Amherst, N. S.

Cotswolds.

H. B. Parlee, Sussex N. B.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
Donald Innes Tobique River, N. B.

SWINE—Berkshire.

Howard W. Corning, Cheggogin, Yarmouth Co. N. S.

Yorkshires.

The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yar. Co., N. S.
S. J. Goodliffe, Sussex, N. B.
Boyd A. Wetmore, Harvey, Albert Co., N. B Co., N. B.

Chester Whites.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
W. C. McLeod & Sons, Loch Lomond, West, N.S
Wm. Erb, Sussex N. B.

Tamworths.

C H. Giles, Brooklands Fredericton, N. B.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns. Walter McMonagle & Sons, Sussex, N. B.
S. Jones, Sussex, N. B., White Plymouth Rock Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandotes S. C. Brown Leghorns, White Leghorns.
dgar Ayer, Sackville, N. B., Breeder of Single Comb Buff and White and Rose Comb Black Orpingtons
W. J. MacLeod, Loch Lomond West N. S. Houdans and Silver Grey Dorkings and R. C. R. I. Reds
Manning K. Ellis, S. C. Buff Orpingtons, Barred Plymouth Rock.
Barred Plymouth Rocks, S. C. Brown Leghorns, R. I. Reds, J. C H. Benson, Sussex, N. B.

PURE BRED AYRSHIRE BULL WANTED.

I want a first-class Ayrshire Bull from a good milking strain. Would prefer one three or four years old if kind. Would not object to a younger one if from good milking strain. Write **JESSE T. PRESCOTT, Sussex, N. B.**

Halifax Prize List.

(Continued from page 41)

lbs., made at any creamery—1, Acadia Dairy Co., Ltd., Wolfville; 2, W. A. MacKay, Scotsburn; 3, Sussex Cheese and Butter Co., Sussex; 4, Wm. F. Brown, Cherry Valley, P. E. I.; 5, Brookfield Creamery Co

Butter, box, not less than 28 lbs., made at creamery—1, Acadia Dairy Co., Ltd.; 2, W. A. MacKay; 3, Sussex Cheese and Butter Co.

Butter prints or fancy packages, not less than 20 pounds, made at any creamery—1, W. A. MacKay; 2, Acadia Dairy Co., Ltd.; 3, Wm. F. Brown; 4, Sussex Cheese and Butter Co.; 5, Brookfield Creamery Co

Tins, four to eight pounds, made at any creamery or dairy farm—1, Lewis R. Rose, Urbania; 2, Acadia Dairy Co., Ltd.; 3, Sussex Cheese and Butter Co.

Butter, packages or basket prints, not less than ten pounds, made at any dairy farm—1, L. R. Rose; 2, J. A. McGee, Port Williams; 3, J. H. Jones, Pownal, P. E. I.; 4, F. W. Foster, Kingston Station; 5, A. W. McA. Wilson, Belmont.

Crock, box or tub, not less than 20 pounds, made at any dairy farm—1, L. R. Rose; 2, Dan. C. McNeil, Brophy, N. S.; 3, J. A. McGee; 4, Mrs. L. H. D. Foster, Marshfield, P. E. I.; 5, J. H. Jones.

Cheese, two factory, colored, not less than 50 pounds each, made in Maritime Provinces—1, John A. Muchison, North Wiltshire, P. E. I.; 2, Agnes D. McLellan, Bridgetown; 3, Chas. J. Cooke, New Perth, West, P. E. I.; 4 W. H. Leslie, Kensington, P. E. I.; 5, Leo. J. Murphy, Tidnish, P. E. I

Cheese, two factory, colored, not less than 50 pounds each, made in Nova Scotia—1, Marydale Factory, Lower South River; 2, Argyle Factory, Lower South River, N. S; 3, Glassburn Factory, Lower South River, N. S; 4, Upper South River Factory, Lower South River, N. S.

Cheese, home-made dairy, not less than 15 pounds—1, E. C. Young, Bridgetown; 2, Miss C. Drake, Cornwall, P. E. I.

CLASS 58.—HONEY, ETC.

Liquid extracted honey, not less than 20 lbs.—1, Julia A. Corbett, Amherst Point; 2, Charles Piers, Halifax; 3, J. O. McGregor, Kingston Station; 4, Miss S. Knowlan, Bedford; 5, Craig Bros., Amherst

Honey comb, not less than 20 lbs.—1, Julia A Corbett

Extracted granulated honey, not less than 20 pounds—1, Craig Bros.; 2, J. O. MacGregor; 3, Julia A. Corbett; 4, Miss S. Knowlan.

Extracted liquid clover honey, not less than 10 pounds—1, Craig Bros.; 2, J. S. MacGregor; 3, Charles Piers,

Display of comb honey, not less than 10 lbs.—1, J. S. MacGregor.

Five pounds bees wax—1, John J. McDonald, Lake Verde, P. E. I.; 2, Craig Bros.; 3, J. S. MacGregor.

Educational exhibit—1, Charles Piers; 2, Julia A. Corbett.

Oxford Down Sheep.

We are offering a high-class lot of Oxford Down Rams at reasonable prices, two shear, one shear and Lambs. Our flock took Sweepstakes' prize at Pictou County Exhibition over all other breeds.

R. G. McLEOD & SON,
Lansdowne Sta., Pic. Co., N. S.

FOR SALE (Bargain.)

White Wyandottes—Cock, first prize at Cape Breton Co. Exhibition, Oct. 1909, for $2.00; Cock, second, for $1.50 R. C. Rhode Island Reds, Cock, third, $1.25; Cockerel, third, $1 25; Cock, $1.00. Also limited number Cockerels at $1.00 each.

T. C. MUNN,
Leitche's Creek Crossing, - N. S.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

SINGLE COMB BROWN LEGHORN COCKERELS—$1.00 each, ROCKWOOD POULTRY YARDS, St. John.

WANTED.—One Chester boar, from 6 to 8 months old, weighing about 160 lbs.—A. J. NICHOLSOM, 205 Kempt Road, N. S.

WANTED.—A capable general servant, fond of children. Wages $12 a month to start with. Apply MR. P. F. BLAUCHET, Rothesay, N. B.

FOR SALE, CHEAP.—One two horse treadpower, slightly used; as good as new. Write J. D. FRIER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

PRINTING.—Letterheads, $2.00 per thousand, up. Envelopes, $1.50 per thousand, up. Special facilities for stock breeders' supplies. Cash with order.—MARITIME PUBLISHING CO., Sussex, N. B.

Don't Judge a Roofing
By Its Looks

On the surface, most ready roofings look the same.

But the weather finds the hidden weakness.

The weather finds the vegetable fibers in the fabric and rots them.

The weather finds the volatile oils which are concealed below the surface. The sun draws these oils, in globules, to the top of the roofing, where they evaporate in the air.

Where there was a globule of air, there remains a hole. And behind each hole is a tiny channel which lets the weather and water into the very heart of the roofing.

When the sun and the wind and weather have sought out the hidden weaknesses, the roofing is porous, instead of solid; watersoaked, instead of waterproof.

You can't tell by looks, which roofing will last twenty years, and which will go to pieces in a single summer.

Seventeen Years of Service

But you *can* do this: You *can* tell the original Ruberoid roofing—the only roofing which *has* lasted seventeen years—from the 300 substitutes which have proven their unworthiness.

Ruberoid was the first ready roofing. Its basis is the best wool felt impregnated with Ruberoid gum.

It is this wonderful flexible gum which no other maker can duplicate.

It is this gum which gives Ruberoid all the flexibility of rubber without containing an iota of it. It is this gum which withstands wind, weather, sun, fire, acid, gases and fumes, where all other compounds fail.

It is this gum, in the Ruberine cement which accompanies each roll of Ruberoid roofing, which makes ours practically a *one-piece* roofing—sealed against leaks—sealed against the weather.

Ruberoid comes plain and in colors. The attractive Red, Brown and Green Ruberoid are fine enough for the costliest home. And the color feature is exclusive—protected by patents.

In the past twenty years we have had experience not only with all ready roofings, but with other roofings—shingles, tar, tin, iron and other roofings.

We Test All Roofings

Each roofing we have exposed to the weather test, on our roof garden at our factory.

The result of these twenty years of tests we have written into a book which will be gladly sent you free.

This book is a gold mine of roofing information, telling about the advantages and disadvantages of each roofing for each purpose. To secure a copy, address Dept 103 The Standard Paint Company of Canada, Ltd., Montreal.

RUBEROID
(TRADEMARK REGISTERED)

Be sure to look for this registered trademark which is stamped every four feet on the under side of all genuine Ruberoid. This is your protection against substitutes which many dealers brazenly sell as Ruberoid. Ruberoid is usually sold by the one dealer in town. We shall tell you the name of your Ruberoid dealer when you send for our free book.

The Standard Paint Company of Canada, Ltd., Montreal, Canada
New York Hamburg London Paris

BELLEVUE STOCK FARM.
Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.

SHROPSHIRES FOR SALE—Shearling rams, Rams and ewe lambs of the right type. Prize winners at Pictou among the lot. D. M. CAMERON, Elgin, Pictou Co., N. S.

FARMERS.—We are buyers of dressed pork, poultry, fresh eggs and want prime quality goods. Small or large shipments. Prompt returns.—JOHN HOPKINS, St. John, N. B. Established 1867.

GUERNSEY BULLS FOR SALE.—No 1. Fairie's Gem, 5 years old, dam, Fairy of Sea Grove, sire, Gem of Norwood No. 2, Maud's Heir, 3 year old, dam, Maud of Brookside, sire, Island Heerloom of Gleuview. For particulars apply to M H. INGRAHAM, Box 322, North Sydney, C. B

SPRING PARK AYRSHIRES FOR SALE.—One two-year-old bull, imported in dam, two one-year-old bulls, and three September bull calves, All from deep milkers. Sire, Netherhall Gentleman Joe (Imp.)—SIMMONS BROS., Box 435, Charlottetown, P. E. I.

FOR SALE.—One aged Chester boar, one aged Yorkshite boar, one Black Berkshire boar, one year old; one Duroc boar, two years old. These animals are all prize winners at the Halifax Exhibition and good stock. Pedigree with each boar.—J. A. NICHOLSON, 205 Kempt Road, N. S.

FARM FOR SALE.—On Tobique River, opposite mouth of O'dell; 146 acres; 80 acres cleared; level, smooth and easily worked; well watered; well fenced; good house and barns; land in good condition and good soil for clover and potatoes. Further particulars at MARITIME FARMER Office or apply E. H. MORRIS, Arthurette, Vic Co., N. B.

BAVIS' bred to lay White Plymouth Rocks won at the Fredericton Exhibition first cock, first cockerel, first pullet, first young pen, first adult pen in utility class, special for best White Rock male. If you want the kind that win as well as lay, write me. A few magnificent Single Comb White Leghorn Cockerels, $1.00 each. If stock is not satisfactory I refund your money and pay all expressage.—B. BAVIS, Cross Creek, N. B

GUERNSEYS FOR SALE.—Cow, four years old, to freshen in January. Heifers from two weeks to two years.—D. G. MACKAY & SON, Scotsburn, Pictou, N. S.

"Agents make BIG MONEY SELLING "VOL-PEEK" Granite Cement. Mends holes in Graniteware, Iron, Agate, Tinware, etc. Mends a hole in 1 minute. Every housewife buys. Greatest seller on the market. Agents make over 100 p. c. profits.—V. NAGLE, WESTMOUNT, QUE.

FOR SALE—Fine breeding pen, S. C. B. Leghorns, ten birds, only ten dollars. Pure bred W. Wyandotte eggs, per setting 75 cents. W. Pekin and Cayuga duck eggs, $2.00 per eleven. Newly hatched chicks 15 cents each. 50 egg Incubator, good as new, only $4.00. J. W. Hughes, Firgrove Bellisle Creek Kinds Co N. B.

WANTED,—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission. $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W. A. JENKINS' MFG., CO. London, Ont

When a cold becomes settled in the system, it will take several days' treatment to cure it, and the best remedy to use is Chamberlain's Cough Remedy. It will cure quicker than any other, and also leaves the system in a natural and healthy condition. Sold by all dealers.

Better Seeds for less money. That will be your experience, if you place your orders with S. P. GOUDEY, Yarmouth. He imports Seeds by carloads and supplies Farmers' Associations and Agricultural Societies at 5% commission.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., November 9, 1909. Number 3.

The Bovine Tuberculosis Problem.

By A. R. Ward and G. M. Haring.

BOVINE tuberculosis is a menace that no stock raiser or dairy man can afford to ignor. There is no problem confronting agriculture to-day of more fundimental importance than that constituted by this disease.

Tuberculosis shortens the life of cows. Exact data on this point is not available, but we have a statement of an experienced San Francisco dairyman that tuberculosis shortens the average productive life of cows by one half. It unquestionably reduces the efficiency of a herd as a machine for producing milk from feed When its existence may be detected, the market value of the animal is obliterated, and the reputation of the breeder of fine stock is injured by general knowledge of its presence in his herd,

Tuberculosis saps the profits of the cattle business by rendering beef unwholesome for human food. The extension of the practice of thorough meat-inspection is gradually closing the avenues for the profitable disposal of animals seriously affected with tuberculosis.

La Chasse Foxey

Champion Jersey bull at the 1909 Halifax Exhibition, owned by Glen View Farm, Sussex, N. B. The various animals in the Glen View herds are annually subjected to the Tuberculin Test. F. G. Hall, V. S., of Amherst, who officially tested the herd recently did not find a single reacting case. This is a good record for so large a herd, nearly fifty head.

The losses to animal industry from bovine tuberculosis are not confined to cattle. Many hogs are fed on skim milk in connection with the dairy business, and in the Middle West hogs "follow" beef cattle. Both result in the dissemination of tuberculosis among hogs to an alarming extent. In 1905 the United States Department of Agriculture inspected 25,357,425 hogs post-mortem, condemning 64,919 carcasses and 142,105 parts.

The importance of bovine tuberculosis, as an economic problem in agriculture, has too frequently been clouded by a discussion of its public health aspects. The incentive for combating the disease has too often come from the health officer. Many dairymen have gathered the impression that the general acceptance of the view that bovine tuberculosis is not a menace to public health would end their difficulties with tuberculosis. The disease will be with us, even if the scientific world does finally agree that the menace to public health from the milk of tubercular cows is slight.

There is no abatement of the demand that milk be produced by healthy cows. Studies of the subject during the past eight years have augmented the evidence that tuberculosis of cattle is transmissible to man. To what extent, is a subject of discussion only. Whether this is eventually shown to be great or small, we shall have the demand, on the ground of sentiment at least, that milk be produced from healthy cows. At the present moment we are witnessing a marked revival of the demand that milk be sold only from cows that have been shown free from tuberculosis by the tuberculin test. The tuberculin-test ordinances in operation are creating a demand for healthy cows. One of the greatest obstacles to their success is the lack of "tested ' cows with which to supply the deficiency brought about by the enforcement of the tuberculin test. This gives tested cows a higher market value.

During the past four years we have made tuberculin tests of dairy cows in the various counties of the San Francisco Bay region and in the Sacramento and San Joaquin valleys. In all, 1,976 tests have been made, of which 453 (22.9%) showed reactions. Only four herds, the largest consisting of 39 cows, were free from tuberculosis. A much smaller proportion of isolated cows were affected than those in herds. Of 71 animals, isolated, or in groups of five or less, only 6 (8%) reacted.

A more accurate statement of the prevalence of tuberculosis, as shown by our experience, would be one compiled from results of the tests of whole herds the first time that they had been tested. In this case the figures show 1,022 animals tested, with 326 condemned (31.9%). Tuberculosis was found in 82% of the herds tested.

Few of the herds were particularly suspected of harboring tuberculosis, and most were tested during routine inspections under the auspices of municipalities. They are in the aggregate representative of the dairy cattle producing milk for city trade in the region designated. It should be emphasized that most of these cows were in dairies supplying market milk. The conditions of this branch of the dairy business require that a uniform amount of milk be put out at all seasons. This necessitates the frequent purchase of fresh cows, with the consequent increase of opportunities for the introduction of tubercular infection.

THE CONTROL OF TUBERCULOSIS.

Unfortunately, but unavoidably, the early efforts to eradicate bovine tuberculosis were undertaken without a full appreciation of the magnitude of the problem. It was thought that after testing all of the cattle in the suspected herds, killing a few, and disinfecting the stable, the disease would be exterminated. Many dairymen, without compulsion, made honest efforts in this direction. When owners began to experience great losses from the destruction of tubercular animals, the scheme of compulsory testing, with indemnification by the State, was introduced. With the funds that it has been possible to get from legislatures the work has made pitiful progress as compared with the magnitude of the task. With few exceptions, tuberculosis has succeeded in keeping pace with the puny efforts directed against it. At present, State effort to control tuberculosis is largely confined to those herds where the owner voluntarily submits to the testing of his herd and agrees to co-operate by taking measures to keep his herd clean.

As long as bovine tuberculosis was considered as a public health problem purely, without regard to the financial interests of dairymen, there was a disinclination on the part of the owners to face the facts. The increase of the disease among the cattle in this country, and the better knowledge of its nature, is resulting in a change of attitude. The more progressive breeders and dairymen are appreciating the fact that tuberculosis is an unnecessary and unprofitable adjunct to the business, and many are inquiring about methods of freeing their herds However, the importance of controlling this disease is as yet inadequately appreciated by the great majority of the owners of live stock. As long as the breeders are content to ignore the presence of the disease and make no effort to combat it systematically, just so long will this plague continue to thrive. We heartily agree with Dr. D. E. Salmon, late chief of the Bureau of Animal Industry, who says, "A disease so widespread can not be controlled unless those most interested in the live stock of the country give active support to the undertaking. It is, therefore, wise to examine the subject in an unbiased manner; study carefully the nature of the disease; to learn as nearly as possible what the losses are; to what extent these losses are liable to increase, and whether measures of repression are or are not advisable. It is not a question of sentiment, but one of fact, and should be examined as a business proposition."

The possibility of eradicating bovine tuberculosis from herds is a fact dem-

onstrated beyond all question. Its successful accomplishment, however, requires the thorough mastery of the principles governing the spread of the disease. We believe that the dairyman must obtain this information and act upon it in the conduct of his business. This is indispensable whether State aid is available or not. To that end we have prepared this circular to describe methods which have been successful in eradicating tuberculosis from dairy herds.

In the application of any methods for the eradication or prevention of tuberculosis, certain important characteristics of the disease should constantly be borne in mind.

ITS SPECIFIC NATURE.—Tuberculosis does not develop spontaneously. The cause of the disease is the bacillus of tuberculosis, which exists only in the bodies of tubercular animals and their excretions, or in substances contaminated by them. In-and-inbreeding can produce it. Dark, filthy, badly ventilated stables, poor food and crowded conditions may contribute to its rapid spread among cattle, but the disease does not originate in an animal, no matter how bad its environments, unless it is exposed to the disease virus.

ITS INFECTIOUS NATURE.—Tuberculosis is most readily communicable. This point, in connection with the first, can not be too strongly emphasized. The disease results from the association of tubercular cattle with healthy ones, and under such conditions will spread in spite of every sanitary precaution. It is a mistake to assume that the disease can not thrive and multiply among dairy cattle kept under ideal conditions. The invigorating influence of fresh air and sunshine, wide, well-watered pastures, well ventilated, ideally constructed, immaculately clean barns, and abundant and well-balanced rations will not stop its spread. It is among some of the best kept herds that the disease has been found to be alarmingly prevalent. Contact, direct or indirect, is the chief way in which the disease is disseminated, but calves frequently contract the disease from the milk. Calves and hogs fed on milk from tubercular cows soon become infected. The disease has become, in the last few years, common among hogs, not only in California, but elsewhere. Many things point to the fact that they contract the disease from the milk and droppings of cattle, and not from one another. In a pig, the disease usually develops more rapidly than in a calf. Professor Russell, of the Wisconsin Agricultural Experiment Station, has pointed out that although the disease is usually spread from herd to herd by the purchase of tubercular animals from which others of the herd gradually become infected, the relative rate of the spread of the disease by association is not as rapid as the rate of the spread produced by the feeding of highly infected milk to calves.

RATE OF DEVELOPMENT.—Different individual animals exhibit the widest variation in the duration of the disease. In the majority of animals the disease pursues a leisurely course, consuming years before causing death. Others develop a rapidly fatal type. Its onset is always unobtrusive, and its progress so gradual that its presence does not inspire apprehension. Losses are so evenly distributed in point of time that they do not excite serious alarm, as do other less destructive diseases of the pestilential type, which kill many suddenly.

RECOGNITION OF TUBERCULOSIS.—The disease is manifest after death by the presence of tumor-like nodules (tubercles) in various parts of the body. These tubercular masses of long standing undergo changes resulting in the formation of purulent, or cheesy material sometimes permeated with gritty particles of lime.

"The presence of the disease is seldom manifest until the development of the tubercles is so great that their presence interferes with the duty of some vital organ. Rough, hard skin, staring coat, emaciation, chronic bloating, roached back, and dropping head only appear in acute or very advanced cases. Coughing is not necessarily an indication. This symptom is usually absent even when the disease is in an advanced stage, and, on the other hand, non-tubercular animals occasionally are troubled by constant cough. Animals in prime condition may be badly infected, and be quite as dangerous in spreading the disease as those which show the symptoms. A very small percentage of the seriously diseased animals can be detected by a recognization of symptoms. In testing a group of about 308 cows, we condemed 64 as tubercular, on the basis of the tuberculin test. Only 9 showed physical signs of tuberculosis. This observation emphasizes the fact that a physical examination is useless in recognizing any considerable percentage of the tubercular animals in a herd.

"Substantial prgress in the control of tuberculosis depends upon our ability to unerringly ascertain the existence of any stage of the disease in an individual, as a guide to measures for the prevention of its spread. The tuberculin test does this, and its discovery opened the way to the successful control of tuberculosis. It is a regrettable fact that the phrase "tuberculin test" in the minds of dairymen stands for various systems of compulsory slaughter of cattle, and that it is not esteemed as a discovery of inestimable value to the dairy industry. Its compulsory use, accompanied by a wholesale slaughter of animals, has given origin to a host of misconceptions and misrepresentations regarding its accuracy that will hardly be lived down in a generation. In answer to various criticisms. Dr. D. E. Salmon has summed up the accuracy and safety of the tuberculin test as follows:

From the investigations and observations that have been mentioned, it may be safely concluded—

(1) That the tuberculin test is a wonderful accurate method of determining it an animal is affected with tuberculosis.

(2) That by the use of tuberculin, the animals diseased with tuberculosis may be detected and removed from the herd, thereby eradicating the disease.

(3) That tuberculin has no injurious effect upon healthy cattle.

(4) That the comparatively small number of cattle which have aborted, suffered in health, or fallen off in condition after the tuberculin test, were either diseased before the test was made or were affected by some cause other than the tuberculin.

The test is simple in its application. It consists in taking the temperature of the animal with an ordinary clinical thermometer several times to determin its normal, injecting the tuberculin with a hypodermic syringe, and then taking the temperature at intervals of two hours between the eight and eighteen hours after the injection. Any one with intelligence enough to run a dairy profitably should be able to psrform the labor of the test in a competent manner. The animals should be kept under favorable conditions, and care needs to be taken to record accurate temperature readings. In interpreting the temperature records a careful consideration of the conditions under which the test is made and a knowledge of the sources of error is necessary.

Picking Cherries at Hillcrest Orchards, Kentville, N. S. Crop for 1909, 13,000 Boxes.

TESTS BY OWNER.—The work necessarily has been and must be carried on by those having some knowledge of veterinary science. However, we do not go to the extreme of insisting that the persons performing certain details of the test shall be trained veterinarians. Any intelligent dairyman who will make a little effort to familiarize himself with the test and its limitations can use it on his own cattle with good results. It is only through the cooperation of breeders, dairymen, and vetrinarians that there is hope of immediately improving the extremely undesirable conditions which at present exist. When the majority of the dairymen understand the use of the test and the importance of isolating diseased animals, there will be far better prospects of eradicating the disease than if skilled veterinarians are considered indispensable. The expense of employing a professional to perform every detail of the test, is not only often prohibitive, but in many localities no qualified licensed practitioner is available.

WHAT IS TUBERCULIN? Tuberculin is prepared from glycerinated bouillon in which tubercle bacilli have been grown from six to eight weeks. The bouillon culture is first boiled for two hours to kill all the living organisms. It is then filtered under pressure through a germ-proof earthenware filter to remove the dead bodies of the germs, concentrated by evaporation, a little carbolic acid added, and it is then bottled for distributation. Its injection into cattle affected with tuberculosis is followed from ten to sixteen hours by a rise of temperature, which lasts several hours, and gradually declines to normal. We find no evidence that it causes an increase in the rapidity of the progress of the disease of animals already affected with tuberculosis, or that it is injurious to them in any other way. It does not even temorarily injure the quality of the milk. It may be obtained through druggists or through the Veterinary Director General, Ottawa.

SYRINGE.—A veterinary hypodermic syringe of at least 6 cc. capacity, such as is commonly used to inject liquid vaccine, is necessary. The same should be provided with a number of short, stout needles, well reinforced at the base.

THERMOMETER.—At least two fever thermometers will be needed, and where more than five animals are to be tested a larger number should be provided. Guaranteed clinical thermometers can be purchased at any drug store. A string should be tied around the thermometer and fastened by a rubber band. At the other end of this string should be attached a small bulldog clamp or wire hook. After inserting the thermometer in the rectum the clamp is fastened to the long hairs at the base of the tail so that if the thermometer is thrown out it will not be broken by dropping to the ground. Thermometers, especially for veterinary purposes, made of thicker glass and with a ring in the end are convenient.

DISINFECTANT.—A small bottle of strong (95%) carbolic acid to be used in disinfecting the syringe before beginning the test, and to disinfect the needle point before injecting each animal, is essential.

VASELINE.—Its use is desirable to facilitate inserting the thermometer, although lard may be substituted. Between the times of taking temperatures the vaseline jar is a safe and convenient place to keep the thermometer.

ORDINARY GREEN PAINT.—This color is convenient for temporarily identifying animals by numbers placed on the rump. If it is desirable to mark them so that the numbers will not become erased for a week or more, rub the paint well into the hair and it will have a slight blistering effect which will cause the hair to stand up for ten days or so.

DIRECTIONS FOR MAKING THE TUBERCULIN TEST.

IDENTIFY THE ANIMALS.—Number them with paint or otherwise. It is not advisable for the beginner to attempt to test too many animals at one time.

TAKING THE NORMAL TEMPERATURES. A convenient way is to take two temperatures, one at the morning milking and one in the evening, but it is preferable to take two more at two-hour intervals from the others. The last one may precede the injection of the tuberculin. Familiarize yourself with the reading of the clinical thermometer, and if trouble is experienced, ask your druggist or doctor to show you how. The largest intervals on the scale are degrees, of which every second one only is numbered. The smaller intervals designate 2-10 of a degree. Readings can be made accurately to half of one of these smallest divisions (1-10). Insert the thermometer full length in the rectum. Smear the bulb of the instrument and

the end of the index finger with vaseline to faciliate the operation. Attach the thermometer to the base of the tail by means of the snap, or a wire hook and rubber band, and allow the thermometer to remain in the rectum three minutes. By the use of this device three or four thermometers may be used, and the temperature of several animals taken in the time that is required to take one. Be sure and shake down the mercury below 99° F. each time before inserting the thermometer in an animal.

TEMPERATURE OF CATTLE.—The usual normal temperature of a milk cow varies between 101° F. and 103° F., but it is not common to find apparently healthy cows that temporarily are even lower or higher than these limits. Excitement may cause a temporary rise, excessive summer heat also increases the normal temperature, while the drinking of cold water may reduce the temperature a degree or two. Most cattle are at their lowest early in the morning and at highest in the afternoon. After exposure to a storm or during severe winds the temperature of the cattle is frequently quite high. The temperature of calves under four months old is much more variable than that of older cattle.

TREATMENT OF ANIMANS DURING THE TEST.—On account of the ease with which variations in temperatures are caused, it is important to keep the animals, that are being tested, under normal conditions. They should be fed, watered, and milked as usual. Avoid as much as possible the violent handling of nervous cows in taking their temperatures.

ANIMALS THAT SHOULD NOT BE TESTED.—Cattle suffering from any disease causing a fever (garget, "fox-tail abscess," retained after birth, etc.) should not be tested until the fever has subsided. If the cattle have been recently injected with tuberculin, a retest within one month will be unreliable, and it is safer to allow six or eight weeks to elapse. Most authorities state that the test should not be applied to cows within four days of calving, or during the period of heat, for fear that these conditions might cause a rise. It is the usual practice to inject all animals, and take the above mentioned conditions into consideration, and retest if a rise in the temperature does occur.

MAKING THE INJECTION.—This is preferably done in the evening, eight hours before the time of milking in the morning. The syringe should be disinfected by drawing it full of corbolic acid, emptying it, and then rinsing in boiled water before beginning the test. In addition to this, just before injecting each animal, dip the tip of the syringe in strong carbolic acid to disinfect it. Fill the syringe through the needle from the bottle of tuberculin, and avoid contaminating it with dirt. Set the burr on the piston rod of the syringe so that no more than the dose intended can be injected. The large numbered divisions of the syringe piston rod stand for cubic centimeters (cc). The size of dose will be stated on the tuberculin bottle. The injection is usually made in the side of the neck where the skin is thin and loose. A fold of the skin is taken in the left hand, and the syringe point inserted in the pocket thus formed and the dose injected. When a cow is restraind in a stanchion the operator should stand quite close to the cow's left shoulder with his arms over the animals neck and back and inject the tuberculin in the skin on the right side of the animals neck. This position insures the greatest security from interference or injury by the movements of the cow.

TEMPERATURE AFTER INJECTION.—Take temperatures at about the 8th, 10th, 12th, 14th, 16th and 18th hours after injecting, and continue in those cases showing a rising temperature. Where an animal shows a rise above 102.5° F., it is well te take the temperature at more frequent intervals. In hot weather it is essential that that the injection be timed so that the 8th to 16th hours will occur in the cool part of the day.

INTERPRETATION OF THE TEMPERATURE RECORDS.—In case of a reaction (indicating the presence of tuberculosis) there must be a rise of 1.5° F. or above the normal temperature as determined on the preceeding day. The interpretation of the temperature record of the animals showing a rise of less than 2° F. requires care. The elevation of temperature usually comes on gradually, although in the more pronounced reactions, where the temperature goes above 105.0° F., the rise is frequently abrupt. This should usually occur between the 8th and 16th hours. It should remain practically at a maximum for two hours or more and gradually subside. When the temperature reaches 104° F. or more, and is maintained for some hours, the animal is certainly regarded as tubercular, if no fever was shown before the injection. Erratic elevations of short duration do not indicate a reaction. The slight variations caused by the weather, the drinking of cold water, or the irregular handling in applying the test are as apparent in the temperature records of the non-reacting cows as in the others, and a comparison of the temperatures of the animals which show no indication of a reaction should be taken into account in interpreting the records. In case of doubt, the animal should be separated from the herd and re-tested not sooner than a month.

If all conditions pertaining to the protection of the animals have been fulfilled, the temperature behavior mentioned is a very sure indication that the animal is suffering from an active, although possibly a small tubercular growth. If there is no reaction, the correct interpretation is more difficult. Dr. V. A. Moore, of the New York State Veterinary College, says that in this case there are three conditions which must be taken into account, viz.

(1) If the animal is extensively diseased it may, in rare instances, not react. In this case the physical condition would show that the animal was at least not healthy.

(2) If the test was made during the period of incubation there would be no reaction, although the disease may soon develop. (By a period of incubation we mean the time elapsing between the exposure to a disease and its actual development. In tuberculosis this period is very variable. In some cases the disease begins to progress at the day of infection; in others, the germs may be lodged for a long time before the disease actually develops.)

(3) It is known that cows which have reacted, may, because of the natural arrest of the disease, fail to react subsequently; but later the disease would start up again, when the animal would react. Great care must be exercised, therefore, in the interpretation of negative results, especially tests made in herds where tuberculosis exists and where it is possible that the animals failing to react have been infected.

RE-TESTING.—A single test of a diseased herd can not be depended upon to detect every tuberculous animal. If any animals are found by the first test to be affected, the herd should be tested regularly every six months. On account of the many chances for the infection of a herd the practice of systematic annual testing is recommended for all dairy herds. Animals purchased subject to the test should be re-tested in four or six months. As has already been mentioned, a re-test within a month is unreliable, and when animals are re-tested within six months it is better to use a double dose (4 cc.) of tuberculin.

PROVING THE TEST.—The one reliable means of ascertaining the accuracy of the tuberculin test is the slaughter of the animal, and the demonstration of the existence of the disease in the organs. This, necessarily, demands the services of a skilled professional man, familiar with the manifestations of the disease, and with the regions in which such manifestations may be located. In some cases animals, not reacting to the test, have been slaughtered on account of serious lung disease with a view to determine if the test had missed a tubercular animal. The manifestations of actinomycosis (lumpy jaw) in the lungs have been mistaken for tuberculosis in such instances.

There is prevalent a popular notion that the failure of an animal to react to the test a second time constitutes a demonstration of the inaccuracy of the test. The falsity of this becomes evident, upon consideration of the facts regarding the result of previous injection of tuberculin, and of the fact that recovery may have occured in the mean time.

Conversely, criticism of the test and of the honesty and skill of the man applying it, has resulted from the observation of cases in which cattle have failed to react once, and then reacted later without further exposure to infection. The matter is explained by the fact that cows may not develop the disease for months after exposure to the germs of the disease; or an old centre of disease, so nearly healed that it would not give a reaction on the first test, may later have become anew the centre of active disease.

HOW A DISEASED HERD CAN, AT A SMALL EXPENSE, BE CHANGED TO A HEALTHY ONE.

First, test the entire herd. Successful methods of eradication are all based on the intelligent use of the tuberculin test. After testing, the question arises, "What can be done with reacting animals?" Of course the reacting animals must be at once separated from the healthy in order to stop the spread of the disease.

IF THE TUBERCULIN TEST SHOWS COMPARATIVELY FEW AFFECTED.—In this case, segregate the reacting animals at once. It is unquestionably good policy to exterminate the disease by removing the infected animals from the herd, with a view of disposing of the same as soon as circumstances permit. The method formerly and most commonly employed of disposing of reacting animals was by slaughter and burial. Where this wasteful method has been employed the results have been discouraging; even when the Government recompensed the owner in part for the loss of his stock, it has been unsatisfactory. A large number of reacting animals are usually but slightly diseased. They readily take on flesh, and can be fattened and used for beef. They must be carefully examined by a veterinarian when killed, and if the disease is found to be extensive, the carcass must be condemned. The Government meat inspection regulations admit the use of meat slightly tuberculous animals for food, for it is recognized that under such circumstances the cooking of meat is an effective safeguard against danger. The zeal of various health officials in demanding the waste of the flesh of every reacting animal has been a great setback to the control of tuberculosis through developing opposition.

Packing and Sorting Cherries at Hillcrest Orchards, Kentville, N. S. Crop for 1909—13,000 Boxes.

THE STABLE MUST BE THOROUGHLY DISINFECTED.—Many of the failures to eradicate tuberculosis by the repeated application of the tuberculin test, and the prompt removal of all reacting animals, are due to the fact that the stables and sheds were not disinfected. The watering troughs should, of course, be disinfected. That bacilli discharged from the tubercular animals in the corrals may remain virulent for a considerable time is possible, although the action of direct sunshine quickly destroys them. The corrols should, therefore, be thoroughly cleared of manure.

(Continued in next issue.)

A sprained ankle will usually disable the injured person for three or four weeks. This is due to lack of proper treatment. When Chamberlain's Liniment is applied a cure may be effected in three or four days. This liniment is one of the best and most remarkable preparations in use. Sold by all dealers.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser be said :—**"I saw your adv. in the MARITIME FARMER."**

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SUSSEX, N. B.

Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

NOVEMBER 9, 1909.

Dates of Issue.

November.....--23
December..... 7-21

APPLE SHIPPERS MUST MEET STRINGENT INSPECTION.

Trade commissioner, H. R. Pousette of Durban, South Africa, writing in a recent issue of the Trade and Commerce Weekly report says:—

"Just about this time exporters in Canada will "be preparing their first shipments of apples for "this market. It is to be sincerely hoped that an "honest effort will be made to send out only sound "fruit, owing to the stringent regulations in force "here, to exclude over a certain percentage apples "infected with scab or codling moth. If before "packing all fruit displaying traces of infection be "rigidly rejected, there is little doubt that it will "pass the inspection of Cape, Orange River Colony "and Natal, although perhaps not the Transvaal in "which the percentage is fixed at one in 100. Last "year the inspection does not appear to have been "efficiently enforced, with the result that some con-"signments were admitted that should have been "condemned. But this season such laxity will not "be permitted. Therefore, Canadian shippers who "may be counting upon the same luck as was theirs "last year, may receive a severe shock. Perhaps it "is wrong to speak of 'luck' they doubtless received "cash against consignments, and some of them may "have cared little what happened their shipments or "what loss the consignors may have had to sustain. "If this statement seems harsh, it is beyond a doubt "that it is not made without foundation. It could "well be wished that poetic justice might descend "upon those who so endanger a valuable trade, and "bring discredit upon conscientious exporters.

"Canadian apples come in here at a time when "the fruit market is practically empty, including "the Christmas season. They are consequently "most welcome to both the dealers and the public, "by the latter of whom they are held in high favour. "If this season's operations result in loss, it will of "course deter many next season from taking a risk "which holds out so small a probability of compen-"sating profit. And this matter of profit suggests "a further point, a very large margin is required to "cover avoidable but apparently inevitable losses; "if, however, these latter could, or rather were, "minimized by more careful selection at the other "end, the fruit could be sold at more reasonable "prices, and it follows, in larger quantities. It re-"quires little perspicacity to prophesy that those "Canadian firms who send apples this season to "South Africa, carefully picked and properly packed, "or, in a word, who conscientiously endeavour to "protect the interests of their clients, will the fol-"lowing season reap the result."

THE TRURO AGRICULTURAL COLLEGE COURSE.

The long courses at the Truro Agricultural College opened on November 2nd. While it is always advisable for a student to begin his course on the opening day and thus glean all the information that is dispensed from the very start, yet a student may enter a few days or weeks later and make very satisfactory progress during the remainder of the term. Any young man who could not get away from home to attend the opening session will find that, even now, it is not too late. By industriously applying himself to his studies he can catch up and have as good a showing as the rest of the class at the final examinations If you have any thought of going to the long courses do not delay, but get there as soon as possible.

There are many farmers and farmers' sons who do not see their way clear to leave the farm for a season long enough to attend the long courses, for these provision is made by the short courses which will open for two weeks beginning January 4th, 1910 A large number of boys and men attended the short courses every year since they were instituted. The number is growing larger every succeeding year. Each and every one are loud in their praises of the good they derived from the courses. Some of those who attended in 1908 came back in 1909 accompanied by one or more of their neighbors. They considered their "time well spent" and undoubtedly they will be found traveling Trurowards about the third of January, 1910. Will you be among the number ? The MARITIME FARMER can assure you that you will go back home more alive to your opportunities than ever.

Anyone who purposes attending the short courses should write Professor Cumming as soon as possible and in this way he will be able to know about how many students to expect.

The Ladies' short courses at Truro takes up a study of Domestic Science, Dairying, Horticulture and Poultry. Any lady who can manage to get away from home for two weeks should not miss the opportunities ofiered by the Truro Agricultural College The ladies' course opens on January 4th, 1910. We trust that our lady readers will make a strong effort to attend. Having decided to attend the College do not forget to drop a card to Prof. Cumming. Special arrangements have to be made for the Ladies' classes and it is all-important that the College management know beforehand how many they may expect so that ample arrangements will be made. Lay your plans early and when the opening time arrives be at Truro Agricultural College ready to share in the many good things that have for their sole aim better and brighter farm homes in Maritime Canada.

HEAD WORK.

"A man is worth only about a dollar and a half a day for that part of his body from his head down; there is no limit to what his head is worth." This is what we were told the other day by a farmer who is using brains in connection with his farm work, just the same as he formerly did in his other business. Brains made his business go, and they are making his fanm pay handsomely. Among his neighbors are men who are eternally cursing the country, the weather, and everything in general, and who are not making enough to move themselves and family out of the district. Some men are naturally born leaders, so the neighbors say; everything which they put their hands to seems to go, and people say they are lucky. Their crops miss the frost and the neighbors say it is luck. That is not luck; it is brains. That farmer used his brains the fall before. He plowed his land and got it in condition for seeding and had his grain seeded in the spring two weeks before his neighbors were through plowing. There was no luck about that, but just plain "horse sense." It is the head work that counts. If the work is notproperly planned enough time will be lost to pay the wages of three or four men. That means labor lost, which is money wasted. It could have been saved by the use of brains, and almost any human being has brains, only in some they are in great need of development and exercise.

HAVE A CLEAN-UP DAY.

On the average farm, in spite of any general rules to the contrary, there are almost always quite a number of things that are likely to be taken out of their prescribed places and littered around the farm. So long as open summer and fall weather continues, the inconvenience of this state of affairs is not so great, because of the ease with which anything may be hunted up even if it has been misplaced. But in the winter all this is changed, and unless all small tools are gathered up before the snow comes it is quite likely that a number of them will lie under the snowdrifts untill spring. It is a good plan, at this season of year, to make a well-organized effort to have all scattered tools gathered into place, all lumber piled up, and a general preparation made for the coming of the snowstorm. It gives one a most comfortable feeling to look out of the window at the thickly descending snow flakes, realizing at the same time that all shovels, chains, sacks, pieces of lumber, harrow sets, and all other easily buried things about the farm have been safely stowed away under a good roof.

BOVINE TUBERCULOSIS.

In compliance with the request of several of our readers for informatiou on the subject of "Bovine Tuberculosis" we take pleasure in publishing extracts from a bulletin dealing with this subject recently issued by A. R. Ward and C M. Haring of the California College of Agriculture. It is a long way from California to the Maritime Provinces, but the conditions that exist in the West are also existing in the East and the sooner each and every cow owner gets busy and satisfies himself that tuberculosis does not exist in his herd the better it will be for the producer and the consumer of cow products.

AN OPPORTUNITY TO BUY GOOD DRAFT MARES.

On another page of this issue will be found an advertisement announcing an Action Sale of pure bred Clydesdales. Three stallions and seventy-five mares make up a Scotch-Clydesdale importation by Mr. Wm. Meharey, of Russel, Ontario, who will offer them for sale at St. John, N. B., about the first of December. The mares will be mostly two and three years old and bred the past season to good stallions in Scotland. Realizing the importance of good draft mares to the horse raising industry of the Province the Department of Agriculture for New Brunswick sanctions the importation and sale and furthermore to encourage New Brunswick farmers to buy, the Department will pay the freight from St. John to the purchaser's station. This gives the farmers of New Brunswick an equal chance as far as transportation charges are concerned. No restrictions are made as to residence of purchaser or resale of animals so the Prince Edward Island, Nova Scotia or Upper Canadian buyers may come in and buy what they want, but any New Brunswick

farmer who buys and who accepts the offer to pay the freight on his horse or mare to his station must undertake that the animal or animals upon which the freight is so paid, shall not be sold out of the Province within five years and during that time shall be annually bred, in case of mares, to Clydesdale stallions wherever practicable. The greatest need of the horse raising industry in New Brunswick to-day, is more and better draft mares .While one can raise good mares by judiciously breeding ordinary mares to good draft stallions and found the fillies thus obtained to draft stallions, and so on, still the process is too slow to capture many of the shining dollars that are sent out of the province each year for draft horses. The results come much quicker when one has a good draft mare to begin breeding. We venture to say that these Clydesdale mares will more than pay for themselves in a comparitively short time leaving a margin of profit on the transaction. Lost opportunities are never recalled. Do not miss the opportunity offered by this Clydesdale sale.

Ground Limestone vs. Quick Lime

Great interest is being manifested by the more intelligent farmers over the question of using lime in some form or other to correct the growing acidity of their soils. The difficulty of growing clover and alfalfa in many sections is largely due to the acid condition of the soil and this condition is found more in old lands than in new.

It is important to know in what form we can use lime so it will do the least injury and the greatest good to our land. The Pennsylvania Experiment Station has made some experiments on this matter which are valuable to know and we invite the attention of our readers to them as given below:

Fertilizer	Bus. corn—ear	Bus. oats—grain	Bus. wheat—grain	Hay lbs.
Nothing	42.1	32.3	13.6	2783
Quick lime	35 3	29.9	15 0	2631
Ground lime stone	43.1	34.0	16.2	3127

These results seem to indicate that limestone is much better than quicklime; in fact, the quicklime has shown a decreased yield when compared with the yield where nothing was used.

The following table shows the total pounds produced and value of the crops for each rotation :

	Pounds per acre during rotation	Value per acre during rotation
Lime, 4,000 lbs. every 4 years	11632	$58.82
Limestone, 4,000 lbs. every 2 years,	13572	68 80

It must be remembered that fifty-six pounds of lime is equivalent to 100 pounds limestone in its power to neutralize acid.

In southern Illinois where it was found difficult to grow either clover or alfalfa, the application of ground limestone brought success at once. The main trouble up to the present in procuring the ground article is the lack of enterprize on the part of firms owning quarries where commercial lime is made.

The Maritime Winter Fair

The prize list of the ninth Annual Maritime Winter Fair is now in the hands of the general public. Anyone wishing to receive a copy may do so by sending a card to Mr. F. L. Fuller, Truro, N. S. The fair will open on December 6th and will close on December 9th.

Never in the history of the exhibition has the management been in the position offer to such inducements to both exhibitors and visitors as at the coming Fair. The Departments of Agriculture of Nova Scotia, New Brunswick, Prince Edward Island and the Federal Department at Ottawa as well as the town of Amherst and many prominent citizens have generously contributed of their means towards additions, improvements and the extensive prize list.

The old Winter Fair building, which was inadequate to the rapidly increasing demands has been largely remodeled. A much needed Dairy Building has been erected, which accommodates sixty cows giving the necessary light, ventitation and seclusion indispensable in a proper dairy test.

An eighty foot extension has been added to the old building and the interior arrangements made perfectly sanitary and comfortable giving, as well, a separate judging ring for swine, and other necessary improvements.

The management has made special efforts to increase the prize list, and in addition to former prizes the premiums in the Dairy classes have been extended to fourth and fifth places.

The different breeds of sheep have separate clases and prize lists.

Poultry and Honey classes have also received additional money as well as a number of important specials. The Maritime Poultry Association has generously donated two valuable cups; one for the best exhibit of live poultry and one for the best exhibit of dressed poultry. Mr. M. J. O'Brien a prominent Railway contractor of Montreal, has kindly donated a very valuable cup as a special for Shorthorns. In addition to premiums so generously donated by prominent men in previous years, special prizes have been donated by Barker's Limited, Amherst; Terrace Hotel, Amherst and the Altas Stock Food Co., Amherst.

The public will appreciate the fact, that in addition to the regular prizes donated by public spirited citizens for a competition in judging Beef and Dairy cattle and sheep, open to farmers and farmers' sons, under twenty five years of age, the following additional prizes are offered: A valuable cup donated by Prof. Cumming, principal of the Agricultural College, Truro, for the highest score in the above mentioned competition. Friends of farmers' sons have also donated a valuable cup for the highest score in stock judging to competitors, not students or ex-students in the regular course of an Agricultural College.

Every effort will be made to have the educational features of the 1909 fair attain a higher standard than ever before. Lectures will be delivered by eminent men who are experts in their various lines.

Transportation companies have again offered exceptionally low rates and we are assured that the farmers will avail themselves of the splendid opportunity of exhibiting and receiving instruction from practical demonstrations to be witnessed at this "Great Fair."

Fattening Steers.

Different Amounts of Dry Matter for Fattening Steers (Pennsylvania Station Bulletin 88).—Two lots of twelve steers each were fattened during sixteen weeks with like amounts of digestible matter, but different amounts of dry matter. Both lots were fed with broken ear corn, cottonseed meal and corn silage, with mixed hay at first and corn stover later. One lot received all the ear corn they would eat, and a limited amount of silage, while the reverse was true of the other lot. This second lot, when on full feed, received about twice as much silage and two-thirds as much corn as the first, and were given, therefore, much more dry matter, although the digestible matter was supposed to be the same. The steers given the full silage ration were at a disadvantage during the first two weeks, indcating that the increase in the amount of silage should be gradual when large amounts are introduced into the ration. "After the first period the gains of both lots were comparatively uniform and almost parallel."

Why Waste Hay.

A neighbor came into my barn last winter and on looking through the sheep stable, where I am feeding 200 lambs, remarked that his 20 head of breeding ewes were wasting more hay than all of my lambs. After he left I got to wondering why it was that so many farmers worked hard to put up hay in the summer and then allow their stock to waste in the winter.

I am feeding 200 lambs for market and they are allowed more hay than they will eat up clean, but all that is left in the mangers is taken out twice each day and fed to some colts and idle horses that eat it up clean. Cattle do not like hay left by sheep and will not eat it if they can help it, but horses do well on it. The sheep do not leave enough hay for all of these horses, only about enough for a night feed. I have eight horses and nine cattle in the barn with the lambs and they are all in good thriving condition and a man can carry more hay under one arm than they all waste in a week.

To keep sheep from wasting hay you must have the mangers built so they cannot pull it out. I feed grain and hay in the same manger, so they are always kept clean.—Webster Reeder, in Breeders' Gazette.

Sod Drains

EDITOR MARITIME FARMER.

In some countries sod drains are laid and have met with persons who testify to their great efficiency and long service viz. for 30 years.

The tough sod of our broad-leaf marshes would seem to be an ideal sod for the construction of such drains and would provide a cheap and ready method for underdraining. It is the writer's purpose to lay a few such drains, by way of experiment, but before doing so he would like to know whether any of the MARITIME FARMER readers can give any information as to construction and satisfactory working of such drains.

The method proposed is as follows: Dig drain eight inches wide at bottom. Cut sod two inches thick to fit bottom. Lay on edge a piece of "2 "x4" scantling with a slight taper toward one end. On each side set on edge a sod five inches wide and then place an eight inch sod on top. In every case lay the grass side of the sod toward the center of the drain. Cover the scantling to such a distance, say six feet, as will allow its easy withdrawal, after filling in and tramping and then repeat the process on another six foot section.

W W. ANDREWS,
Westmorland Co., N. B,

Editor's note:—If any of our readers have constructed sod drains or have seen them used we would be pleased to have them send us full particulars as requested by Mr. Andrews. This is one of the many ways in which you can help your fellow man. Let your light shine.

Size of Cow Stalls

Joseph E. Wing gives as the best size to build cow stalls the following: Some stalls I built last fall are 5 feet from manger to edge of trench; the trench is 16 inches wide and 8 inches deep. The manger is 30 inches wide inside and the front board is 20 inches high. Cows never have stepped in the manger. The bottom of the manger is raised 16 inches at the back and 6 inches at the front with concrete so that cows can readily eat all the meal without difficulty. Cows are fastened with neck chains. The stalls are 7 feet wide with two cows in each; one stall is 3 feet 6 inches wide for single cow. These stalls have been ideal from the point of comfort to cows; they have been easily kept clean. The one defect is that for a large cow the stalls are too short. They should be all right if 5 feet 6 inches or 6 feet for Shorthorn cows, measuring from the front of manger back to the edge of gutter. We used stall partitions of boards and concrete floors and gutters. Do not make shallow gutters or your cows will stand in them.

When to Spread Manure

Barn yard manure should never be allowed to remain exposed to the elements until it rots; for by doing so, much of the carbonaceous matter is lost, thereby lessening the manure's humus making power. Manure should be spread upon the land at as early a date as practicable. Every stable should have an arrangement whereby the liquid excrement from the animals can be caught and thus a great fertility substance saved, which, otherwise, might be lost. Experiment stations have discovered that when manure remains in the yard through the spring and summer months it depreciates about one-half in value.

Ploughing Wet or Dry.

Sandy soils are usually not injured by handling when wet, but the case is different with clay soils, says W. J. Spiliman in 'Renovation of Worn-Out Soils.' A fair quality of brick can be made from any heavy clay soil by working it thoroughly when wet and then drying it in the sun. The effect produced by working clay soils wet is known as puddling.

Irrigation ditches in the west are puddled by first flooding them to make them muddy and then driving bands of sheep along in this mud. This makes the bottom impervious to water, and prevents loss from leakage.

If a clay soil is ploughed, or even harrowed when too wet, it is more or less puddled. In this condition it becomes cloddy and impervious to air and water. Old roadways that have been thoroughly puddled from traffic in all kinds of weather may be distinguished in fields many years after they have been ploughed up and put into cultivation.

The proper time to plough land is when it is just moist enough to break up mellow, neither wet enough to leave a slick surface where rubbed by the moldboard nor dry enough to break up in large clods; or, as the southern farmer puts it, when the soil has a good season in it.

If continued rain follows wet ploughing, little harm follows; but hot, dry winds would soon leave only a mass of unmanagable clods. In spring and midsummer ploughing, particularly, it is of the utmost importance to run the harhow immediately after the plough. This prevents the formation of clods. In late fall ploughing the clods are no disadvantage, for they will be broken up by freezing and thawing.

Selecting Breeding Ewes

See to it that the ewes for breeding purposes are not thin and emaciated, for if one has passed through the feeding season and is in this condition there must be something wrong with her. Make sure that there are no broken mouthed or aged ones in your flock; neither should the ewe be too fat. A good frame is essential for the producing of healthy progeny. The open market is the best place to select your stock; unless some neighbor can accomodate you with a surplus from his flock. The beginner should never select his ewes without having along a competent judge of sheep who will advise with him as to selections.

Value of Feeds.

In a ton of bran we have 244 pounds of protein, for which we pay a trifle over 8 cents a pound, and have 838 pounds of carbohydrates and fat thrown in. In a ton of old process oil meal we have 586 pounds of digestible protein, for which we pay 44 cents per pound, and have 794 pounds of carbohydrates and fat thrown in. In a ton of cottonseed meal we have 744 pounds of digestible protein, for which we pay 36 cents per pound, and have 291 pounds of carbohydrates and fat thrown in.

It will pay farmers to look into this Seed proposition of S. P. GOUDEY'S. He has supplied thousands of satisfied customers for years and now offers his services to you. Any Farmers' Association or Agricultural Society can secure a supply for their members for spring of 1910, if they will ask for particulars. He imports by the carload and sells on 5% commission. S. P. GOUDEY, Yarmouth N. S.

HORTICULTURE

Nova Scotia Apples for British Exhibitions.

When the Furness liner Gulf of Venice sailed on the 4th inst. for Liverpool, she had among her cargo a very choice selection of Nova Scotia apples being sent to England for exhibition purposes. It has been the custom in former years to send apples to the Royal Horticultural Exhibition. This will not be done this year, but the apples will be sent to the different County Shows instead. The Gulf of Venice will take ten barrels and a number of boxes for the exhibitions.

Co-operation in Shipping Apples.

EDITOR MARITIME FARMER.

As a direct result of cooperation in packing and marketing fruit comes a saving in shipping expenses. The Furness Withy Co. has had a practical monopoly of the transportation of apples from Nova Scotia to British markets. The freight rate has been for a number of years 90c. per barrel, of this amount from ten to twenty-five cents has gone in rebates to middlemen who stand between the grower and the steamship company. At the instance of the Fruit Growers Association, the Department of Trade and Commerce has this year had a clause placed in the contract of the Furness Withy Co. making it illegal for them to pay rebates, thus putting all shippers on equal terms. In accordance with this policy the rate has been made 80c. per barrel instead of ninty as before; and all shippers are notified that there is no rebate. While nominally such is the case, yet no one but the most unisophisticated expects this to be true. All the middlemen are as active as in the past soliciting shipments and caring for the interests of the fruit growers. Somebody is paying for this, for these men do not work for fun, and eventually the apples must pay the bill. The export of apples from the Annapolis Valley now amounts to about 500,000 barrels annually. The freight on this amount at ninty cents per barrel would be $450,000.00. Ten cents a barrel rebate is $50,000.00 and fifteen cents amounts to the neat little fortune of $75,500.00. This is about the amount some half dozen large operators have been dividing each year. The United Fruit Companies, controlling from 75 to 100,000 barrels this season, had an idea that they should share in this nice little plain. Accordingly their Traffic manager approached the Furness Withy Co., the Allan line and the C. P. R., the same reply come from them all "we cannot do business with farmers they will not stand together." This organization, however, is not loosely bound. It is incorporated under the Provincial Act; the members are united on a common ground; and best of all as a business proposition—they have the apples, 50,000 barrels of them right in the ware houses. The next move was to charter their own steamers. F. C. Whitman of Annapolis is a shipper now, he is also an active member of the Fruit Growers Association. Mr. Whitman knows how to charter steamers and how to load them. So the first steamer sailed from Annapolis on the 18th of October carring 8000 barrels. The second on the 27th carrying 9500 barrels, and a third is chartered for the 25th of Nov. to carry 9000 barrels, the freight is 63c as against 80c via Halifax. The saving of 17c per barrel is a fair profit and this alone is a justification of co-operation. The large dealers were offered the opportunity of coming in with us on a 63c freight rate, but not one of them would break from the old lines, showing very plainly that there was more money for them in standing on the old ground.

Scale of Points for Judging Fruit.

The accompanying scale of points for judging fruit proposed by the Nova Scotia Fruit Growers Association at their annual convention, is submitted by Mr. R. W. Starr, in behalf of the executive of the association who are asking for the approval of or comment on this scale of points by persons interested in fruit growing and exhibiting. The object in view is to introduce a uniform system of fruit judging throughout Canada.

The "explanation of terms" is necessary for the guidance of both judges and exhibitors, especially at county shows, where experts may not be available. We trust our fruit growing readers in various sections of the Maritime Provinces will forward their views for publication. The Association will be pleased to get any suggestions approving, the proposed scale or suggesting any important changes that will be for the mutual benefit of all concerned.

Scale of Points for Judging Fruit Proposed by the Fruit Growers' Association of Nova Scotia, 1909.

Score Card for Single Plates Named.		Score Card for Collections.	
Points.		Points.	
25	Freedom from Blemish.	20	Freedom from Blemish.
25	Color.	15	Color.
20	Uniformity.	10	Uniformity.
15	Form.	10	Form.
15	Size.	10	Size.
		10	Commercial Value.
		10	Quality.
		10	Nomenclature.
		5	Arrangement.
100		100	

EXPLANATIONS OF TERMS

FREEDOM FROM BLEMISH.—Any injury by Insects, Fungus, Bruises, Loss of Stem or other cause, lessening the value of appearance of the Exhibit, may be called a Blemish.

COLOR.—Bright, clear well developed color, characteristic of the variety preferred.

FORM.—Represents the perfect or normal type of the variety.

UNIFORMITY.—Specimens should be as nearly alike in size, form and color as possible.

SIZE.—Indicates care and skill in production, and usually, other points being equal, size wins.

COMMERCIAL VALUE.—Standard, known market varieties, as grown in and suited to the district, preferred.

QUALITY.—To be considered in collections, Seedlings, new varieties on trial, or other sorts in competition.

NOMENCLATURE.—Exhibits must be correctly named according to the nomenclature adopted by the Society, Association or Exhibition at which they are shown.

ARRANGEMENT.—Taste and skill in staging so as to attract attention and add to the general appearance of the exhibit.

KEEP MILK SWEET!

It is important to thoroughly cleanse pans, separators and other utensils with hot water. The microbe that sours milk is inaffected by hot water.

ASEPTO SOAP POWDER

in the water will thoroughly destroy germs We guarantee it to be antiseptic, and it is as cheap as soap.

Sold in 5c Packages by ALL DEALERS

ASEPTO SOAP POWDER SWEETENS THE HOME.

Asepto Manufacturing Co.

St. John, - - N. B.

Selection of Fruit for Exhibits.

The following article on "The Selection of fruit for Exhibits" appeared in the November number of American Fruits and as it bears on the subject brought up by the Nova Scotia Fruit Growers' Association in another article on this page we reproduce it for its valuable suggestions:

WHAT CONSTITUTES FIRST CLASS SPECIMEN.

First class fruit for exhibit purposes consists of large specimens typical in shape and color, uniform in size, and free from all blemishes. The specimens should be large but not abnormally so. It is usual for the exhibitors to select the largest specimens he can find regardless of the shape and type. This is a serious mistake since these specimens are enormous because of abnormal development, and, consequently, cannot possess the typical characters of the varieties. A specimen should be large but should still posses the typical character.

It is desirable to know the original types of the different varieties. For example, there are different forms of the Baldwin apple. There is the oblong form, possessing high color, with short stem. Similarly differences are observed in size and marking. This is true not only of the Baldwin, but to a greater or less degree, of the other varieties of fruit. It is important that the grower know and select that type of the variety which most nearly resemble the original.

AS TO HIGHLY COLORED FRUIT.

Every specimen for the exhibit should be free from all blemishes. There should be no funguous spots or insect injuries. A word of caution in regard to highly colored, immature fruit may be helpful here. At fair time apples particularly are not fully developed and effort is made to find the highest col-

(Continued on Page 64.)

Agents Wanted!

We want agents to handle the Acme Steel Ladder. It is by far the best seller on the market today. You can, with horse and rig, make $5 00 to $10 00 a day by simply calling on property owners in your vicinity.

The Acme Steel Ladder affords protection from fire in a greater degree than any other ladder.

The Acme Steel Ladder is made and sold in one foot lengths. These can be fastened in such a way as to make a ladder of any length perfectly rigid.

They can be moved anywhere on the roof, either from the top or bottom of it.

Send for information regarding our selling proposition.

The Acme Ladder is made in one foot links just the same as the old style ladder but with a very simple lock which is fully protected with patents. When the ladder is together the links are held rigid.

If you are thinking of equipping your buildings with steel ladders and there is no agent in your locality and will write us we will have a man call on you.

The Acme Steel Ladder Co.,
SUSSEX, - - N. B.

Rural 'Phones Solve These Every Day Problems.

Problem 1. Bad Roads:—

The old way was to curse nature and idly await sun's return.
The new way is to telephone for what you want and smile because you get information in a thousand part of the time.

Problem 2. Weather Forecasts:—

The old way was to work on belated information, and to excuse the losses with "That's what the farmer has to put up with."
The new way is to telephone every morning to the weather man and overcome much of the needless hustle and bustle of the old way.

Problem 3. Prices Current:—

The old way was to ask a neighbor or trust to the newspapers.
The new way is to get information in the nick of time over the 'phone, thus knowing when to sell and when to hold.

Problem 4. Emergencies:—

The old way of procedure when some one took sick, was to harness up the "driver" and make all haste for the doctor. Effort in this direction often procured as its only result the information :—"doctor is out."
The new way is to call up the doctor on the 'phone, and know instantly what can be done pending the medical man's arrival.

Problem 5. Help:—

The old way was to allow men to go on boy's erranda—waste half a morning walking to Smith's only to find his harrow was already loaned.
The new way is to make the 'phone your errand boy—buy, borrow, beget by means of the "silent partner."

Ask For Booklet 2816

DYNAMOS-MOTORS THE NORTHERN ELECTRIC AND MFG CO LIMITED TELEPHONES-ARC LAMPS MONTREAL TORONTO

Manufacturers and suppliers of all apparatus and equipment used in the construction, operation and maintenance of Telephone and Power Plants. Address Office nearest you.

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Northern Electric & Mfg. Co.,
LIMITED.
Montreal, Toronto, Winnipeg, Vancouver, Rgina.

HOME WORK.
$7 to $10 Per Week.

We want reliable parties to knit for us at home, whole or spare time. We furnish machine, yarn, etc. Send your name and address at once for full particulars.

The Canadian Whoesalle Distributing Co., - - Orillia, Ont.

Bitter Pit in Australian Apples.

A disease which is causing serious annual loss to the fruit growers of Australia, and which is puzzling both scientific and practical men, is bitter pit in apples. It has been again this season the chief cause of irregular prices in oversea markets, just as it was last season. Apples in perfect condition when packed, frequently turn out so badly affected with bitter pit at the end of the voyage to Europe that they are almost unsaleable. Shippers are often blamed for forwarding inferior fruit, when they are really blameless, because there was no sign of bitter pit when the fruit was sorted and packed. No one knows the cause of bitter pit or its life history. If its origin were only known, and what conditions promote its development, there would be some hope of a remedy being found for its suppression.

It is prevalent in all the Australian states, so that fruit growers in all the apple growing districts of the Commonwealth have a direct interest in its suppression. Experts, with long experience of growing and shipping apples, estimate that fully 10 per cent. of the crop in the Commonwealth available for the oversea trade is annually ruined, there must be, according to this estimate, fully 60,000 to 80,000 cases destroyed every year by this frightful orchard scourage. It is generally agreed, by scientific investigators, that bitter pit is not a fungoid disease, and, therefore, is not transmitted by germs. The theory generally accepted is that the disease is connected with the circulation of the sap, causing fruit cells to die in spots. These dead cells form the brown bitter-flavored spots or 'pits' which give the disease its name.

Some practical orchardists believe that the stocks on which apple trees are worked has something to do with the virulence of the disease in Australia; but no one can be sure as to what causes bitter pit. All that is known is that some of the very finest export varieties, such as Jonathan and Cleopatra, are extremely liable to this disease, not in one, but in all apple-growing districts of Australia. Conditions of soil, climate, methods of pruning, cultivation, manuring, and kind of stock used must all be carefully tested before any one can speak with certainty as to the cause and cure of the most formidable orchard scourge Australian fruit growers have yet had to face.

D. H. Ross.

Cucasa—A New Fungicide.

The October number of the "Practical Druggist and Pharmacentical Review of Reviews," under the caption of "Latest New Remedies," contains the following article on Cucasa, which will be of interest to our readers:

"Cucasa is a soluble saccharate of copper and lime, coming into use in Europe in place of the rather cumbersome Bordeaux Mixture. Such institutions and authorities as the Royal Institute of Viticulture and Horticulture, Geisenheim, Germany; the School of Viti and Horticulture, Kreuznach, Germany; Comice Agricole, horticole et viticole, Besancon, France, report favorably on its use..

"Cucasa yields a solution of copper that has all the fungicidal properties of the Bordeaux Mixture, but with the added advantages of offering a clear solution in any dilution and of keeping comparatively long. Being a clear solution, it does not clog the nozzle of sprays; furthermore, much less of it need be used than of the Bordeaux Mixture, for efficient protection. A solution of Cucasa is uniformly alkaline; there can, therefore, be no copper sulphate present in it that would injure the foliage.

When sprayed on the trees, the thin layer of the solution is readily changed by the atmosphere, as in the case of Bordeaux Mixture, into the insoluble film of copper compound that has the specific power to kill fungi. The thinness of this film has the advantage of interfering all the less with the important functions of the foliage, and also of sticking very close—which was found in one case to be for three moths after tpraying. It is put on the market ready or easy use, in packages, to make a ated numb er of gallons of solution.

Gombault's Caustic Balsam

The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for
FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.
REMOVES
BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY
Always Reliable. Sure in Results.

None genuine without the signature of The Lawrence, Williams Co.
Sole Importers & Proprietors for the U.S. & CANADAS. CLEVELAND.

Finds Caustic Balsam to be Reliable.
I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam
I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.
The Lawrence-Williams Co.
TORONTO, ONT. CLEVELAND, OHIO.

ROCK WALL PLASTER

The Best Wall Plaster.

NO HAIR OR LIME NEEDED—
ANY MASON CAN APPLY IT.

The most convenient wall plaster known for farmers and others living in localities distant from central markets where lime, hair, etc., necessary for use in making ordinary mortar, cannot be procured without delay and expense. Rock Wall Plaster is put up in bags of 100 lbs. each and is ready for applying to walls by the simple addition of sand and water. It is a great time saver as it admits of carpenters immediately following the plasterers. Thousands of tons of it sold annually in the States and Canada. A success wherever used. Write for particulars to

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HILLSBOROUGH, N. B.

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any size with the London Adjustable Silo Curbs. Send for catalog. We manufacture a complete line of **CONCRETE MACHINERY.** Tell us your requirements.

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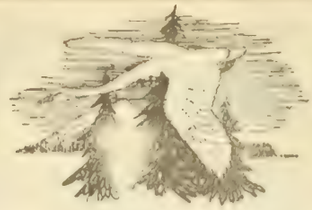
Largest Manufacturers of Concrete Machinery in Canada.

Better Seeds for less money. That will be your experience, if you place your orders with S. P. GOUDEY, Yarmouth. He imports Seeds by carloads and supplies Farmers' Associations and Agricultural Societies at 5% commission.



A long shot, a shot to remember and brag about—that's the story every time some lucky hunter gets a swan. *Dominion Ammunition* does the trick these days. The new *Dominion System* of inspection proves every cartridge or shot shell perfect. Every box of present product *Guaranteed Sure.* Dominion Cartridge Co., Ltd., Montreal.

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IMPROVED & PROVED
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RUSH'S U-BAR STEEL
STANCHIONS

are swinging Stanchions. See the comfort and freedom they give to cattle. Are strongly made to stand the roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle because the latch is easily operated and absolutely secure.

Made in five sizes. Write for Catalogues and prices.

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A. M. RUSH
PRESTON, - ONT.

KEEP YOUR IGNITION RIGHT

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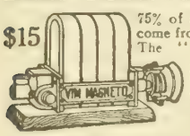

75% of all Gasoline Engine troubles come from poor Ignition. The "VIM MAGNETO" does away with Batteries and can be used on any Engine. It always gives a good hot spark Fully Guaranteed — Agents Wanted.

A. R. Williams Machinery Co. Limited, Toronto

The Song of the Woodpecker.

Running along with a ceaseless song,
The Woodpecker runs the whole day long;
A little gasoline, some water and air
Is all he wants for his bill of fare.

II.

He never complains of a pain or ache,
But labors along for his master's sake;
He will saw your wood and grind your feed,
And thresh your wheat of chaff and weeds.

III.

He will pump your water and run your lathes,
You will count the money he always saves;
He wants no pay, this gasoline knight,
The Woodpecker works because he is right.

IV.

"The music will be furnished by the exhaust,
Free literature, prices and all information,
By the L. M. Trask Co.,
29 Dock St., St. John, N. B."

Southport, P. E. I., Oct. 27th, 1908.
L. M. TRASK, ESQ., St. John, N. B.
DEAR SIR:—I received receipt from you for payment of engine, I have used your engine on different kinds of work with perfect satisfaction. We had a careful scrutiny over different engines and I am satisfied we made a wise choice. I was doubtful for fear I did wrong in not taking your 5 H. P., but your 3½ H. P. has lots of power for me.
Yours, with respect,
P. CORNISH.

The L. M. TRASK CO.,
29 Dock St.,
ST. JOHN, N. B.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Cow Testing Thoughts.

DOUBLE THE INCOME PER COW.

Several instances are on record in Ontario and Quebec where members of cow testing associations, who are systematically weighing and sampling the milk from each individual cow in the herd, have been enabled to increase the yield of milk per cow tremendously. Mere weighing and sampling, of course has not increased the yield, but it has been the most important factor in the general improvement; it has shown that lots of cows were not worth keeping, it has shown that others could profitably consume more good feed, it has shown the owners that they must study each cow to make her do her best, it has shown them that most cows will respond readily to better care and attention and will earn more money if given the opportunity. It means good money in any farmer's pocket if he will have a little patience and act on the information gained from the records. One man is now getting from his 20 cows an income of four hundred and eighty dollars per year more than he was 3 years ago. A smaller herd in 1904 brought in only $23.80 per cow, but last year the owner received nearly $58.00 per cow, in other words he is now getting more than double the previous income per cow.

23 COWS OR 60, WHICH.

Some of the September records received from members of cow testing associations show further remarkable variations in different sections of Ontario and Quebec. It is the exception in the Ontario associations to find less than 600 lb. milk or 20 lb. butterfat as an average yield for thirty days. In Quebec associations the average yields are almost all lower though one or two are well up, even to, 700 lb. milk and 26 lb. fat. One association in Quebec has a total production from 23 cows of 17,800 lb. milk and 775 lb. fat, while in another Quebec association just a little less than that is the total production of 60 cows average less than 300 lb. milk. Twenty three cows in one case, sixty in the other, which kind of cow would one rather keep? What glowing possibilities are indicated here! Most likely the 60 cows could be made to give better yields if fed better. The selection of the best individuals as revealed by the records, and their mating with good bulls of decided dairy descent would give certain results, better cows in every way, without such glaring differences as in this case where the yield of two fairly good cows is more than the total yield of five poor ones.

THINKING AND KICKING.

A recent issue of the "Creamery Journal" states that the farmers of Iowa are taking a special interest in cow testing. To quote a vigorous editorial: "An intellectual bomb has exploded, farmers are thinking. Hundreds are kicking themselves for having so long fooled away their time and effort and money, chasing the dual-purpose nonsense phantom. Breeders of dairy cattle are simply swamped with business. Dealers in dairy utensils report whirlwind sales of scales and Babcock testers."

Farmers of Canada, are you going to let farmers of adjourning States beat you in advanced dairy thought given to cow testing, and in resultant business-like action? One main object of testing individual cows is to ascertain what difference there is between the product or profit of a good cow and a poor one. If our poorest cows were known they would quickly be discarded because there can be no object in retaining them. The trouble is that they are not known Often the poor ones are believed to be good. They will be detected only when records are kept. A more careful study of feeding, and some associated plan of breeding from good pure bred sires will work wonders in improving cows on Canadian farms. Cow testing associations should exist by the hundred, every county needs several; they were never more needed than at present. Who owns the best cow in your county?

GOOD FEED, POOR COWS.

At several cheese factories in Eastern Ontario the average production per cow has been conclusively shown to be approximately 2,800 pounds of milk only for the full factory season. In one group of cow testing associations in Western Ontario 450 grade cows had an average yield of 1,050 pounds of milk during June. The is food for thought: as much milk inteon month from one set of cows as in three months from other sets! There is evidently urgent need of more careful selection of the better class of dairy cows, and need of more intelligent care and attention, real dairy sense, in the handling of the one class of farm stock that brings in the regular income. Plenty of choice individual cows in the single month of June gave from 1,800 to 2,100 pounds of milk, or almost as much as the poorer, unselected dairies averaged for the whole factory season. A great many of our farmers need to wake up to the folly of wasting good time and good feed on poor cows, milk records will quickly indicate which to keep as the foundation of the good herd.

TESTED COWS.

Exhibition time will see some of the finest looking cows on the fair grounds that the admiring public could possibly wish to see, Sleek appearance, general thriftiness and show condition will be appraised, conformity to type will be judged, and point by point various characteristics will be valued. Excellent as they may be, these cows on exhibition must submit to a further examination before the ordinary factory patron is prepared to award them first place in his estimation. He will ask and rightly so, can these cows give a large yield of milk and butterfat at a low cost? He cannot afford to accept just a two days high record, he needs a cow that will attend strictly to business, the business of making money for him, three hundred days in a year. The one vital point for him to ascertain is, does it pay me to keep this cow, is her profit sufficiently large? To this end he keeps records of each individual cow in the herd; records of feed consumed, and milk and fat produced, so that no doubt may lurk in his mind as to each cow's capacity. Cow testing associations make this as easy as possible at a minimum expense; the dairy division at Ottawa, bears the cost of testing, and supplies blank forms free. Several hundred cows in July had over 850 lb. milk and 28 lb. fat to their credit. Many individual records total 5,000 lb. milk this season, while a few choice specimens are already up to 7,000 and 8,000 lb. milk, and 280 lb. fat.

TIME WELL SPENT.

In visiting members of the cow test

How to buy an
EDISON
Phonograph

Do not buy an Edison Phonograph until you are convinced that you want one.

Hear it at the dealer's first.

Hear it play a number of pieces. Hear it play the kind of music that you like—music that you have heard people sing and play—so that you can know how well it does it. Hear it play Amberol as well as Standard Records.

You will decide that the Edison Phonograph is the best.

Then remember that it takes only a small amount of money to buy it. You can get a perfect Edison Phonograph at your own price, whether it is $16.50 or any price up to $162.50—one that will last a life-time, that will give pleasure every day, that will help you to educate your family, that will entertain your friends, and that will while away many hours that might otherwise be misspent.

Standard Records 40c
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There are Edison dealers everywhere. Go to the nearest and hear the Edison Phonograph play both Edison Standard and Amberol Records. Get complete catalogs from your dealer or from us

NATIONAL PHONOGRAPH COMPANY
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GALVANIZED Steel Tanks

We make all kinds of tanks—any size any shape—round square or oblong. They are made of heavy, galvanized steel, so they can't rust

Thoroughly rivited and soldered so they won't leak. Finished around top with heavy angle steel so they are very strong and rigid—a few of them Barn tanks and Cisterns—Bath room tanks—Milk Cooling tanks—Gasoline tanks—Oil tanks—Wind-mill tanks—Sheep dip tanks—Thresher tanks—Street Sprinkling tanks—Steel Water troughs—Hog troughs Etc.

Write for free catalogue THE STEEL TROUGH & MACHINE CO. LTD., TWEED ONT., CANADA

PURE WOOL HEWSON AMHERST FABRICS
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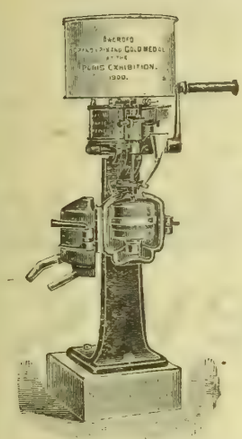
Still Here Selling Melottes After Twenty Years.

Melotte Cream Separators Pay to Buy.



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If your old machine is not satisfactory, we will make a fair allowance for it on a new "MELOTTE."

Testimonials from hundreds of users, some from your own district, sent FREE.

Write for particulars to Department "A."

The Best is always the Cheapest, although the first cost may be more.

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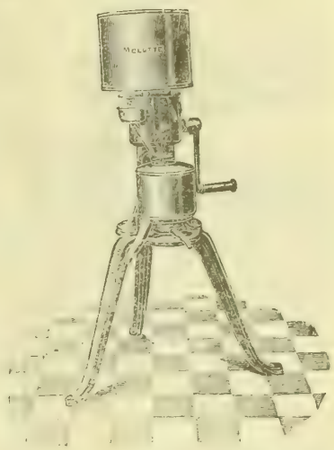

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Easy Terms —ON— Dairy Farm.

50 acre farm near Shubenacadie. 15 acres cultivated, 10 in pasture and 25 acres in woods.

Soil is clay loam, free from stones and farm now cuts 10 tons of hay.

House is 24x23 and barn 24x30. School ½ mile. Small orchard.

Price $700.00

Two Hundred Dollars down and One Hundred Dollars per year.

Write for further particulars, mentioning farm No A-43.

McCALLUM'S Limited,
Truro, N. S.

ing associations organized by the dairy division, Ottawa, the inspectors are sometimes met with this statement by those farmers who are inclined to drop weighing and sampling, "I haven't got the time."

In scarcely any instance can this be considered correct; evidence from farmers the whold Dominion over shows cow testing to be one of the best time saving organizations ever introduced. Why? because it shows definitely that many men have wasted precious time on cows that do not produce enough milk and fat to pay the cost of feed. Thus, the very men who say they have "no time" to take up cow testing are the very men who unconsciously waste thousand of valuable hours. There is time, apparently, amongst the unthinking class of farmers for attending to thousands of profitless cows. With a herd of 20 unselected cows (out of which probably 3 are not making any profit) it would take the small total of 20 hours during the whole year, spread over three days each month, to keep such simple records as would enable the owner to select with certainty the most economical producers. Why waste time year after year on cows that average only about 14 lb. of milk per day for seven months, when a few minutes per month, plus a little brain power, will materially assist in building up a profitable herd.

EVERY MICKLE MAKES A MUCKLE.

In one cow testing association the average production of 126 cows was 520 pounds milk and 20 pounds fat, not very much below the average of exactly 126 cows in another association close by, which was 609 pounds milk and 26 pounds fat. But notice how tremendously that comparatively small difference affects the total yield; for in one case the 126 cows gave, in the month, 86,845 pounds milk and 3,267 pounds fat, but the other lot of 126 cows gave only 65,546 pounds milk and 2,510 pounds fat; or allowing butter fat to be worth 25 cents per pound, actually a difference of $189.25 in one month. Why are not thousands more of our dairy cows made to earn an extra dollar and a half per month for their owners? When the owners are perfectly certain, through having tested each cow in the herd individually, which animals are bringing in a good profit, then the average yield and the total income can be largely increased.

Another contrast shows that 100 cows in one association produced just twenty-seven pounds of fat less than 72 cows in another association 10 miles away; there were thus 25 cows more to be milked, and to have capital locked up in, and to tramp round on the pastures eating good feed that the other cows could have used to better advantage, for twenty-seven pounds less fat. Weighing and testing is the quickest and surest way of detecting those that are below par value.—C. F. W.

Observations

H. H. Wing, professor of dairy husbandry, has reached these conclusions after a year's observation with the dairy herd at Cornell University, and they are worth considering by every man who milks:

1. With a fairly good herd, carefully fed and kept, milk can be produced for 65 cents per cwt., and fat for 16 cents per pound for the cost of food consumed.
2. That individuals of the same breed vary more widely in milk and butter production than do the breeds themselves.
3. The large animals consumed less pounds of dry material per 1000 pounds live weiget per day than did the smaller animals.
4. That in general the best yields of fat were obtained from cows that gave at least a fairly large flow of milk.
5. In general, the cow consuming the most feed produced both milk and fat at the lowest rate.
6. For the production of milk and fat there is no feed so cheap as good pasture grass.

THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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THE BEST

Up-to-Date Courses of Study it is Possible to Provide.

The best teachers we can procure, and entire devotion to our students' interests.

Bring us all the business we can conveniently handle, without canvassing for a single student, or disparaging another school.

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S. Kerr,
Principal.

Note fine lines of Mouldboard.

For general purposes. Designed specially for Eastern Canada. Will turn the furrow in any kind of soil, specially in new land. It does not turn a very flat furrow, nor will it set it up too much. Its accurate lines make it very light of draft.

Capacity: 8 to 12 in. wide, 5 to 8 in. deep.
Handles: 5 feet long.
Weight, complete: 137 lbs. 16

A. Belanger
MONTMAGNY, QUE.

Don't Throw it Away
MENDETS
They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them: fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 25c., POSTPAID. Agents wanted.
Collette Mfg. Co., Dept. R. Collingwood, Ont.

LIVE STOCK.

Buying Rams.

GOOD AND BAD METHODS.

We have now arrived at a time when most of our flocks will be made up. Broadly speaking, they are divided into two sections, those used for ram breeding purposes and those used for ordinary commercial work in breeding shape for mutton for the market. Watching, as the writer has done when purchasing sheep for stud purposes during the coming year at the different ram sales, many breeders of both classes, it has struck him more than once how strange are the methods of many of these breeders in making their selections. In one case one will observe a breeder going through most carefully each consignment of sheep, noting different points, and when the sale ring is visited this breeder will be found to be purchasing certain sheep with certain characteristics clearly defined, and of certain strains of blood.

On the other hand, the vast majority of ram buyers pay little or no attention to the individual pedigree of the sheep, and only equal attention to the type or conformation. Such breeders will be found to be bidding away indiscriminately all through the sale, and taking rams or ram lambs for service which can be purchased at a figure under the price beyond which they will not go.

This method of selection can only lead to one result—the production of an uneven and unmatching lot of lambs. The uniformity of type and symmetry so essential both for the ram breeder and for the ordinary market can only be obtained by breeders who use sires of the same type.

One often hears, "We must have a change of blood." This is an all-important factor in successful management, but to obtain this change of blood does not necessitate going to a flock formed of sheep having for their most prominent characteristics qualities entirely antagonistic and opposite to the flock for which the selection is being made.

There is a saying that "you cannot mix chalk and cheese," but this is really what a great number of our flock masters endeavor to do. The writer overheard this year on one occasion: "I must get a dark-faced sheep, as dark as I can, for my sheep's faces are too light." The particular breeder was successful in his efforts in getting a dark-faced sheep, and probability will be that when his lambs arrive their faces will be more mottled than otherwise. To mate two extremes is wrong, it can never be successful. If a desired object is in view the way to obtain it is to breed gradually towards the desired end. Do not mate extremes, but do it by degrees.

Then, again, one finds many men running after fashionable strains of blood. This is all very well for the owners of those fashionable strains of blood, but it is not judicious, neither does, it, in many cases, lead to success. The fashionable strain of blood represented by winning sires is doubtless a good strain of blood, but to be successful in the flock it is all important that such a strain of blood should be mated with strains for which it is suitable. Without this, to purchase any fashionable strain of blood is to attempt a new experiment which may or may not be successful. No matter what may be the general opinion, the actual result of a lengthy experience has shown that the mating of any two strains of blood is always more or less an experiment. Until such strains of blood have been mated and the result seen, no one can for certainty rely upon it being a success.

The variation in the prices paid for stud sheep has not perhaps been quite so marked this year, for somewhere about £200 represents the top price.

One cannot fail to realize the difference in the position of those who breed and sell the better as compared with those who breed and sell the poorer. What is the reason for this difference? Simply because the former is a man who conducts his business in a thorough and practical manner, and is what may be termed "a ram breeder." He makes it his business; he studies the details, and prepares his sheep for the market in the manner in which they will attract the attention of the buyer, and by his careful breeding and selection of sires and dams, sells to his purchasers year after year stud rams that transmit to their progeny the merit and quality they have themselves, and thus give satisfaction to the purchaser. The breeder at the other end of the list is a speculator, who thinks that the breeding of stud sheep can be indulged in by anyone who owns a flock. It is true all flock owners can, and do, breed ram lambs, but this does not in any sense means that they breed stud sheep.

The ram breeder's business has to be learned, like all other businesses; it is one that has to be managed with as great care and probably greater judgment than many others, and it is certainly one that no man, unless he has great experience, can ever hope to be successful in.—Farmer and Stock Breeder.

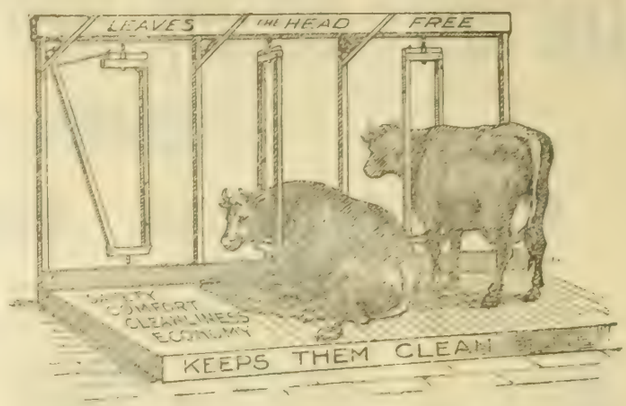
FOR YOUR
Stomach's Sake
You should keep Mother Seigel's Syrup by you. It soothes and strengthens, cures wind, pain, cramps, colic and all forms of indigestion.
Take Mother
Seigel's Syrup
A. J. White & Co., LTD., Montreal.

Live Stock Ear Labels.
You will want them sometime. Spend a cent to see. Write today for free circular and sample.
F. G James, Bowmanville, Ontario

Important but often Neglected.

RIDDLING THE RAMS, "FLUSHING THE EWES" and "Dipping the Whole flock"

The Maritime Stantion Patented 1906.



Has Automatic Lock which is simple and sure. Swings freely so as to give animals the utmost comfort. Holds animal absolutely secure and ensures greatest cleanliness. The simplest, safest and strongest tie on the market. Send for illustrated folder.
Bailey-Underwood Co., Ltd., New Glasgow, N. B

Piano News.

Fall is here now and you want to get that new piano. We have a beautiful stock of the very best makes, such as **Gerhard Heintzman, Brinsmead, Bell, Martin-Orme** and others. We assure you if you will examine this list you will find them, for quality and value, unequalled. Our prices and terms will be most reasonable. Our Exhibition stock is coming in daily and it will pay you to buy now, rather than wait for the rush. Call and see us or write for prices.

The W. H. Johnson Co., Ltd.

157 Granville St., HALIFAX,
also SYDNEY ST. JOHN, and NEW GLASGOW.

50% Increase

We have many depositors who have had their Savings earning them only 3 p. c., **now holders of our 4 1-2 p. c. Debentures,** thus **increasing their Income** in this respect just **50 p. c.**

Remember the Government authorizes Trustees, Executors, etc., to invest in these Debentures.

Terms 1 year up. Price par. Rate 4½ p. c.

The Eastern Canada Savings and Loan Company, Ltd.,
Head Office, 187 Hollis St, Halifax, N. S.

are three important operations that each and every sheep owner should not neglect at this season of the year.

RIDDLING THE RAM.

It is a good plan to make a moduately stiff mixture of lampblack and oil and smear the ram with it between the forelegs and almost as far back as the penis. Keep the ram confined during the day and feed him well, for he will not feed much during the mating season if allowed to constantly run with the ewes and thus his vitality will be much impaired for breeding purposes. By confining him during the day he will eat all the food that he needs. Turn him out with the sheep at night in a small field or yard. Take a record of the ewes that have black markings on their rumps each morning and in this way you will know when they have all been bred. After a lapse of about a week after the ewes have been bred the ram should be riddled with red ochre and oil, so he may serve and mark any sheep that have turned. Ewes carry their lambs from 142 to 150 days or roughly speaking 5 months.

FLUSHING THE EWES.

This term "flushing the ewes" is applied to putting the ewes in extra good condition at time of mating, with the expectation that a crop of lambs will be strong and vigorous, though the latter will depend on the management of the flock throughout the period of gestation, it is believed that many more twin lambs will result if the ewes are thrifty and gaining in general condition when exposed to the ram. Cases are on record in which a shepherd by giving his flock extra good feed for a time before breeding raised twins from each and every ewe in his flock. Twins are much more common with our improved mutton breeds than they were a generation ago, largely because of better care of the flock.

Flushing consists in simply giving the flock suitable and plenty of feed before breeding time. A few weeks before it desired to mate the ewes put them in a fresh pasture where good and fresh grass is abundant and the lamb crop will prove the wisdom of the measure. When dry weather has existed recently, unless there has been a change of pasture probably the flock is not gaining. If a pasture is not available that will afford plenty of good grass, if no rape or other supplementary feed is to be had then some oats fed regularly each day will help the condition. Where farms are sufficiently fenced the stubble fields afford excellent places for the flock after the grain is harvested. This is a way of getting "something for nothing," as near as can be suggested.

Get the flock gaining; do not overtax the ram and care for the flock well during the winter and profits will richly pay the extra cost.

DIPPING THE FLOCK.

Be sure to dip every individual in your flock, before winter sets in, in order to eradicate any ticks or other vermin that may be harbored on the sheep. Unless such vermin are destroyed they will multiply very rapidly during the winter months and will so pester the flock that they will not do well. We have come in contact with some cases where ewes and lambs were so sapped of their energy by vermin that they became so weak that they could not stand. Who has not seen lambs, and ewes, too, with hardly any wool on their bodies before shearing time came around. A close investigation would show that those animals were so pested that they constantly kept rubbing themselves against any and every object they came across or bit at the affected parts in order to allay the irritation. In this way much of the wool was pulled off; you cannot expect a strong crop of lambs from ewes kept under these circumstances.

Dip your ewes now to increase your own profits and to save the dumb brutes from much agony.

Do you want better Seeds? Do you want them for less money? Get the Secretary of your Association to write for particulars. S. P. GOUDEY, Seedsman, Yarmouth N. S.

"Too Late—The Washing's Done. You Have Missed All The Fun"

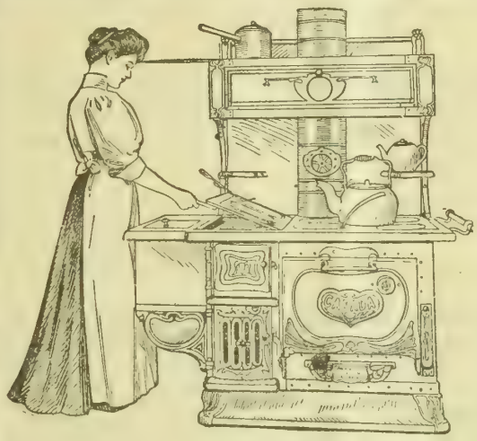
The "NEW CENTURY" takes all the work out of wash-day.

It makes wash-day, the easiest day of the week to the woman who does her own work.

The "NEW CENTURY"—with its ball bearings, powerful spiral springs and easy action—enables even a child to wash a tubful of clothes in five minutes.

Why don't YOU learn more about the no-work way of washing at home? Our booklets tell the whole story. Write for them.

DOWSWELL MFG. CO. LIMITED. Hamilton.



STOVE WISE, FUEL FOOLISH.

A new version of "Penny wise, pound foolish," but it means the same.

It's mighty poor economy to buy one of those low priced, old fashioned, slow heating stoves, which require half an hour to light, and burn tons of unnecessary fuel.

If you want a perfectly constructed stove, heating rapidly and burning very little fuel—you must have a

MOFFAT NATIONAL

When the top of a Moffat National is hot—so is the oven. That means quick and satisfactory cooking.

This stove costs a LITTLE more than the ordinary, but the FIRST cost is the ONLY cost of the Moffat National, and you are certain of having the best.

If you will take the time to visit our stores and inspect the full MOFFAT NATIONAL line we are confident you will be convinced of their merits.

MADE ONLY BY

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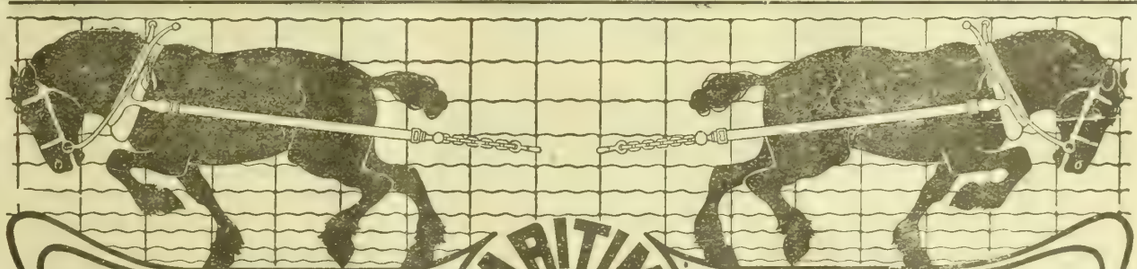
If National Ranges are not for sale in your town, send direct to our Western office for circulars and prices delivered safely to your nearest station.



THE LOCK CAN'T SLIP

MARITIME WIRE FENCE

The illustration demonstrates the phenomenal gripping-strength of our lock. Under the most unusual strain it never gives. It is known as the lock that can't slip; the lock that unfailingly holds the wires in their correct position.

Our Free Catalogue will tell you more about our can't-slip lock, and about the superior English high-carbon, hard-drawn steel wire from which Maritime Wire Fence is made. Address the card to

New Brunswick Wire Fence Co., Limited, Moncton, New Brunswick

THE HORSE.

The Old Horse.

So it has come to good-bye, old friend! With the best will in the world you can't go a step farther; you have reached the end of your tether. You lie there, spent and patient, waiting for the unknown. Thank God, there is no one to interfere with your repose, to goad you with rough voice and gesture, into making a last frenzied effort to work.

Your latest memories have been those of green pastures and pleasant autumn skies; leisured freedom in the open, such as a tired horse loves, untrammeled by saddle, bridle or stall.

Have you mused with temperate regret on the old rousing days, when together we galloped over moor and heath and down, while the rush of the strong, keen air quickened our blood and went to our heads like new wine, and the swift hoof strokes echoed in the beating of our hearts?

Have you pricked your ears in fancy to the sound of the horn, and the sight of the busy, eager hounds, waiting for the signal to start and away, over field and fence, with no thought but to get ahead—all your life concentrated like your master's, in the joy of fleetness, with youth and strength and pleasure throbbing high in every pulse, and a southerly wind blowing in your teeth?

Then the short, sharp race down the hillside, at the finish, and the easy saunter homeward, with the remembrances of a day lived and a fatigue well earned to stimulate your flagging vigor toward the welcome haven of rest?

Do you mind the day, old horse, when you landed a bit too short on the farther side of the brook, and had to scramble out, rideless, though you had the grace to turn and wait for your master, who was in a worse plight than yourself; but you made up for your slip gallantly before the end of the run? Those were cherry days!

Did you wonder when you missed your stable companions what fate lay in store for you, and whether you would follow them to the hammer, and be sold for just what you would fetch, with the chance of finding yourself between the shafts? Was there any room in your philosophy, friend of my best days, to speculate on the gratitude of a man to one who has served him well, rain or shine? to dread that your shares in his life would end with his prosperity and that dark days for him meant darker days for you?

Could you picture yourself over-driven, over-bitted, with a heavy weight at your back and a heavy hand on your rein, threading your way through city streets, pulled here and there, with never a straight course, or a free mouth, or a will of your own, to give you breathing time?

Or did your understanding of your master's moods, never at fault before, guide you to the pre-knowledge of this restful paddock where twilight might deepen into night or peacefully that the transition was a tranquil gliding into slumber?

"It would be kinder to end it at once," says the vet., contemplatively; "he might suffer at the last otherwise. His life will be no more pleasure to him now." "If it were not the truest kindness I would shoot myself first."

"A shot is sure enough, but there's an easier way," continues the vet., stooping to pick up a straw. His reputation for sympathy with animals is as great as that of his skill in ministering to their sufferings; one can trust him implicitly. "Do you give the word, sir?" he asks. A gesture of assent answers him.

He takes a little sharp penknife from his pocket, and stooping quickly over the horse gently presses one of the large neck arteries between his finger and thumb. Then he makes a small incision, and deftly slipping one end of the straw into the aperture places his mouth to the other and blows down it once. A short space of undisturbed serenity and then my old friend, who has not changed his attitude of repose, quivers slightly and lies more still than before.

"There is absolutely no suffering, says the vet., stepping back to me. "The instant that bubble of air reaches the heart it is over. You can rest assured that your old friend felt no pain."

I shake his hand in gratitude and turn away, while through my mind the recollection of some words of dear old Adam Lindsay Gordon's float idly:

"We labor to-day, and we slumber to-morrow,
Strong horse and bold rider! And who knoweth more."

—W. R. GILBERT, in Rider and Driver.

Work the Stallion.

We believe in the working of the stallion. We believe that there is nothing worse for a breeding horse than to be cooped up in a stall and small lot for weeks and months at a time. It is far better to put the stallion to work and make him earn his oats in that manner. We have had a great deal to do with breeding horses during a quarter of a century, and we have never known working stallions to be excelled in prolificacy by idle ones, says Farmers' Tribune. A stallion, as a rule, makes a pleasant worker. There is no reason why a stallion should be restive or annoyingly boisterous in the harness. It is all a matter of breaking, and most stallions take kindly to the harness. We do not think there is ever any real reason why a draft stallion should not do his share of the farm work when he is not travelling. A coach or trotting-bred stallion makes the finest kind of a runabout horse.

We all know that development has meant much to the trotter and pacer. Most of the great trotters of speed have fast records. Dan Patch does a big season each year, and gets his preliminary training at the same time. He is thus in the very prime of his vigor in his success in the stud. The draft stallion should have as much good muscle on his frame as can be put there. There is no reason why he should not be worked in a team with a gelding, but as a rule, he will work somewhat better with a mare. At first it is usually well to use a guide stick between the inside bit ring of the stallion and the halter ring of his mate. Then he cannot be nipping or bothering his mate. Later the guide stick may be dispensed with. A big, heavy draft stallion is usually somewhat heavier in the mouth than an ordinary work horse, and allowance must be made for this. A stallion makes a fine middle horse in a trey team for fall plowing, and if he is used in such a place, two guide sticks should be fitted between the rings of his bit, and the inside bit rings of the two outside horses. Perhaps the handiest way to make these guide sticks is to get a common bamboo fishpole, which will cost ten or fifteen cents. Take two cuts of the right length from the thickest end, and bore holes in them.

In the hole in each end of each stick, splice a loop of half-inch rope with a common barrel snap in it. These may then be hung on the hames of the stallion when not in use, and then they are handy to snap into place when the hitching up is done. By all means, put the stallions to work during the eight months of the year in which they are not travelling. It will pay for the feed and care, keep the horse in a better condition and add materially to the number of foals begotten.—B. S.

Horse Notes.

Be sure that the collars are comfortable and fit well.

Never feed a horse more than it will digest readily.

There is no better way to give a horse a fine disposition than to treat him kindly.

The training of a colt should commence with kind handling from the very first.

Write for a Free Sample of GIN PILLS.

Let Them Prove That They Will Help Your Sick Kidneys and Bladder.

First of all, read these three letters—

34 John St., Hamilton, Ont.

"Being a sufferer from my Kidneys and dizziness, I saw in the papers what good Gin Pills were doing, so wrote for a sample. They did me so much good that I bought three boxes. They worked wonders with me. I can recommend Gin Pills to any sufferer."

GEO. A. BROWN.

Hensall, Ont.

"The sample package of Gin Pills came to hand and we were so much encouraged by their use that we obtained a full size box from our druggist, Mr. Hooper, which relieved me from all pain and has apparently made a perfect cure. We would highly recommend Gin Pills to all sufferers from Kidney and Urinary Troubles."

R. J. DRYSDALE.

Skipness, Bruce Co., Ont.

"I have seen the sample of Gin Pills and received great relief. Enlosed find P. O. order for $2.50 for 6 boxes."

RICHARD WEBSTER.

These gentlemen felt just as you do about Gin Pills—they wanted to try them before they spent any money on them. So they took advantage of our liberal offer and sent for free samples.

DO THE SAME. Sit down, right now, and write us for a sample of Gin Pills. We will send them, by return post, free of all charge.

We know that Gin Pills will help you—and will cure you—if your trouble is the Kidneys, Bladder, Pain in the Back, Rheumatism, Sciatica or Lumbago.

Gin Pills are sold by all dealers at 50c a box—6 for $2.50—or sent direct on receipt of price.

Dept. M. F., National Drug & Chemical Co., Limited, Toronto.

Our 60 Years' Experience

and continued success is a guarantee to You of Good Quality and Fair Dealing.

We are offering for the next 30 days our No 15 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. **If not satisfied we will refund the amount.**

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leather blinds.

Breast Collar—Single strap.

Traces—1¼ wide; heavy single strap lined at both ends; sewed to breast collar.

Saddle—2¾ in., full padded; patent leather; swell skirts.

Breeching—Well made, with flaxseed stuffed dropper.

Reins—Cut from good leather.

H. HORTON & SON., Ltd.,
6 & 11 Market Square. St. John N. B

The best Seeds, bought by the carloads and sold to Farmers' Associations and Agricultural Societies, at 5% commission, by S. P. Goudey, Yarmouth. Twenty years experience.

POULTRY.

The Prince Edward Island Poultry Association's Annual Show.

The second annual show, under the auspices of the Prince Edward Island Poultry Association, will be held in the Market Building, Charlottetown, on January 5th, 6th, 7th and 8th, 1910. L. G. Jarvis, of Grimesby, Ontario, will place the awards. The show will be conducted under the rules of the American Poultry Association. Copies of the prize list will be sent to those desiring them on addressing the Secretary, H. E. Miller, Charlottetown. All classes are open to members of the P. E. I. P. A. and to members of any regular organized Poultry Association in the Maritime Provinces. Entry to be in before December 15th, 1909, accompanied by certificate of membership, signed by the Secretary. The cash and special prizes are worth going after. The introduction to the prize list reads as follows :

"In presenting the Prize List of the Second Annual Exhibition of the P. E. I. Poultry Association, to be held in the Market Building from the 5th to the 8th of January next, we take this opportunity of thanking the merchants of Charlottetown for the generous support they have extended to the Association, both in the way of advertising, and in the presentation of valuable special prizes, thus demonstrating in a most practical way their interest in the breeders of the Little Hen, which is such an economic factor in the welfare of every community.

"To all others also, who have assisted by the presentation of prizes, or in other ways, we wish to extend our thanks, which we feel will be re-echoed by every breeder of poultry in P. E. I.

"The Poultry Products of P E. I. are worth a million dollars a year and where is the man who does not receive some benefit ? Perhaps in the past you only realized the benefit after a good dinner of roast chicken, but if you will go into the matter from another point of view you may be able to figure out how much of that million dollars is in your bank account. Make no mistake, you have some of it.

"The Farmer is the greatest wealth-producer in the world and everything tending to improve his facilities, in any direction, is a public good, and it is in the interest of every farmer and poultry-breeder in P. E. I. that he join the Association at once and make an exhibit. A thoroughly qualified judge will explain to you the defects, as well as the good qualities of your birds, and you will go home with a determination to make a study of the breeding of stock, and thus enlarge your knowledge and raise the standard of your ideals. Don't go through the world looking upon your work as drudgery, but put intelligence into it and become a real farmer. It has been said that anybody can scratch the ground and keep from starving to death, but it takes brains to make a successful farmer.

"There are those, even to this day, who will ask "what is the value of breeding standard-bred stock ?" and to them we will answer "that from $500 to $2,000 is being paid for single birds in the United States, and the Americans have developed the poultry industry through their Associations until the product now exceeds six hundred million dollars a year in value."

" "What have our farmers done along the line of stock improvements?" This will be answered at the annual show in January, and it will astonish you to see what some of our progressive farmers are doing."

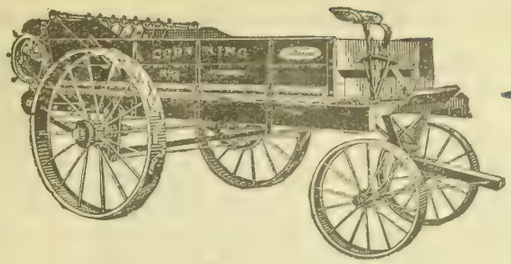
A Reliable Dusting Powder for Pouling.

Insects may be driven from poultry by means of a powder made as follows : Sulphur, 4 ozs.; tobacco-dust, 6 ozs.; oil cedar, 1-4 oz.; crude naphthalene, 3 ozs.; insect powder to make 2 pounds.

The Farmer's Friend—the Hen.

Comparatively few farmers realize how profitable the keeping of hens on the farm may be made. The old-fashioned farmer considers the hens as something for the 'women folks' to look after; as not worthy of a man's time and attention. He thinks they are a 'kind of nuisance anyhow,' and, although he does not object to good, fresh eggs for breakfast or fried or boiled chicken for dinner, he grudges all the money spent for feed, and absolutely will not clean out the poultry house, or take any pains to make the hens happy and comfortable, which has so much to do with their being also profitable. With reasonable care and attention the ordinary hen will lay a net cash profit of a dollar and a half a year. Estimating the hen's value at 75 cents, she pays a net profit of 125 to 200 per cent. This is where all the grain and feed is bought. If the farmer had to buy all the hay and grain he feeds his cows, how many herds would pay even 50 per cent. profit ? And yet the farmer is contented to keep cows. The farmer has greater facilities for profitable poultry keeping than the ordinary man;—a field adjoining his poultry yards can be sown with wheat, oats and barley, and as soon as it ripens, the growing young chicks turned into it will save him all the trouble as to harvesting, and all care as to feeding at the same time. The writer of this article has made a good living for himself and family for fifteen years from poultry keeping, and has never kept over 500 hens to do it. And this has been done from commercial poultry keeping; that is, eggs and poultry sold at market prices. The prices obtained and the profits of 'fancy' poultry are beyond the belief of the average farmer. When Mr. Northrup, in New York State, obtained $1,000 for a rose comb Black Minorca cock, it was then the top notch as to price, but since then the wife of Paderewski—the pianist—paid Mr. Kellerstrass, of St. Louis, $7,000 for a half dozen White Orpingtons, and Mr. Chas. Brundage, of Danbury, Conn., has a Golden Wyandotte cock that he values at $20,000, because the chicks sired by that bird in one year has actually sold for an amount equal to 6 per cent. interest on $20,000. But only a few men are skilful enough as breeders to obtain such prices, the statement above is made to show what is possible. People are realizing more and more that poultry keeping is a business that needs special knowledge and most of the agricultural colleges now give a short course in poultry keeping for the benefit of those who cannot attend the regular college course. Attendance at one of these courses will show the farmer where he is all wrong in his housing and feeding poultry, and will teach him methods whereby the profits may be materially increased.

There are seasons when the farmer finds the market glutted with milk or butter, and it is almost impossible to dispose of his products; but there is never a time when good, fresh eggs are not salable, and the equivalent of cash almost anywhere. On the farm all the green food for winter—cabbage, mangels, beets, etc , may be easily raised, and an acre or two of oats, tied in bundles and stored in a rat-proof house, makes an ideal "litter" to throw in the scratching sheds, in which to scatter the wheat and cracked corn, and thus compel the exercise which is so necessary to the production of eggs in cold weather. No fear that any of the oats will be wasted, the hens will prove most excellent thrashing machines. Among the points in favor of poultry keeping are the small capital on which a start can be made, and the fact that the chick becomes a producer in six months from the time it is hatched, while the sale of the young cockerels for broilers usually pays the expense of raising the pullets to the laying age.—GEO. A. COSGROVE.



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Get full value—not half value—out of the manure. There is only one way. Spread it with a machine which pulverizes all of it, and spreads it uniformly, and as you want it, broadcast over the land or in rows.

Your farm will maintain its own fertility if you give it a chance. You don't need patent fertilizer which only contains a few of the necessary plant elements. Save the manure and spread it with an

I. H. C. Spreader

You make the wisest possible investment when you purchase a a Cloverleaf or a Corn King spreader.

These machines differ in many features of construction and operation, but they are right-working, and that is the essential point. They avoid the waste of manure, greatly reduce the time and labor of handling, and rob manure spreading of its disagreeable features.

You may have a large farm; you may have a small farm. No matter what the size, you will find an I. H. C. spreader to suit your requirements.

Join the ranks of Soil-Builders. It will pay you big money.

Call on the International local agent—see him about a spreader for your own use. He will cheerfully give you catalogues and complete information; or, if you prefer, write nearest branch house for further information.

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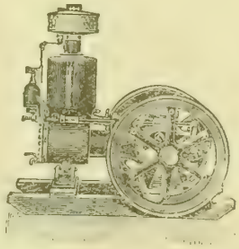

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THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage. Address all communications to EVANGELINE, Port Williams Station, N. S.

Miss Slimmens's Boarding-House.

(Continued from last issue.)

CHAPTER XVIII.

EPISTOLARY FROM NEWPORT.

DEAR DORA: As I am confined to my apartment by a very unfortunate accident, so also by being too indisposed to go out, I have plenty of time in which to write you, as I promised. This is the eleventh day of my arrival in Newport, and about time for me to be starting for home, for two reasons, one of which is, my means are giving out, owing partly to being robbed, and the other is the accident to which I referred in the beginning. I suppose you are curious to know what kind of a time I have had; and though much of it has equalled my most sanguinary anticipations there have been a few drawbacks to that unallowed happiness which is never ours on earth, and which I will confide to you, Dora, on accouut of your uncommon discretion for a woman, never talking about what'll make other folks trouble—so different from that Green and those Pea-Podds, whom I detest, as well as many other Pennyville people. For a mean, gossiping, scandalizing place, I think Pennyville will hold its own with the best. I never bought a little innocent box of pearl-powder, or dropped a remark about a neighbor, that it wasn't scattered to the four winds all over that village.

"One sickly sheep infests the flock,
And poisons all the rest."

Mehitable Green is that "sickly sheep," to speak in a meteor—a talking old maid, a pest to the whole community. But what on earth I'm writing about her for, when I've got other topics for my pen, is more than I know. Yes, Dora, I was robbed; before I had even reached Boston, I was robbed of my beautiful watch that I bought the time I expected to marry "A. de M.," and fifty dollars, good bills, which were in my purse. If you'd see the man that did it, you'd have no more confidence in mortality. I was certain he was a minister of the gospel. He was one of the most respectable-looking person I ever met; and, although being a stranger, I of course endeavored to keep him at a distance, yet, when he offered me his protection in the cars, I did not feel the least hesitancy in accepting it. We even exchanged cards at his earnest soliciation. But he'll suffer for it! I've the consolation to know that he is safe in jail, and I've got my watch back, too; the money will have to go. He'll have the comfort to find that some women cannot be imposed upon with immunity—not only robbing and deceiving them, but taking their cards to keep in the vest-pocket of a gambler and pickpocket. I acted with my usual promptitude in immergencies. I didn't rest till I'd got the police on the track, and telegraphed to New York and other places, and they knew him by the graphical description I gave of him, and he was arrested with my watch, and my name engraved on it, in his possession, so they sent me the watch by express; and I shall be very careful, going home, to keep all my money in my bosom, and not to let anybody, not the bishop himself, or the President, sit in the same seat. It was one of the sweetest moments of my existance when I heard of his arrest. If there's anything I pride myself upon, it's my descrimination, and I hate to be fooled. A person that can wind other people around their finger as easily as I can, don't relish getting tricks played on them, 'specially by sharpers and impositors upon the community. I've made some capital out of that fifty dollars besides, total loss as it was, for it is currently reported in Newport, and especially at the hotel where I am staying, that I lost a thousand dollars in money and a set of diamonds worth fifteen hundred, besides a draft for a large amount, upon which I have ordered the payment stopped It has served as a very good subject for a great many persons introducing themselves to me. I had the advantage of appearing upon the stage as a lioness immediately, besides the falicities it afforded for circulating the rumor of my being an heiress. Just how it got started that I lost so much, I of course can't say, but I have not contradicted it. The old agate that "a rolling stone gathers no moss" ain't true with regard to stories; they roll up faster than a ball of snow, and I shouldn't wonder if, before I left this place, it was currently reported to be ten thousand dollars and enough jewelry to set up a jewelry store. You know I never was troubled with diffidence, and being used to doing business for myself, I wasn't a bit embarrassed to arrive here without an escort. I thought it fallacy to take just as good a room as I durst to, which I did. The very evening of my arrival at this house, there was a hop, as they term it, and I made up my mind to attend, if I did have to enter the ball-room hanging, meteorically speaking, upon my own arm. I wore my new w--g—don't let George read this letter—and the curls were beautiful. I used a quarter of a box of Mean-Fun and spent just an hour on my eyebrows and cheeks, besides taking a tablespoonful of cologne-water to make my eyes bright. I took out all my dresses and looked them over and over. My choice hung between the white satin and the white flounced mull with the rushes. I finally decided upon the mull. I wore five starched petticoats over a full-sized Douglas & Sherwood, and the flounces set out sweetly. My waist didn't look bigger than a churndash, and was encircled by a blue festus. Your pearl set capped the climax I am certain I never appeared so well, which imparted an airy gayety to my spirits, and enabled me to enter the ball-room with a fairylike vivacity. I was conscious of becoming the "sinecur of neighboring eyes;" everybody looked at me and whispered, and looked at me again. I overheard some of their commentaries. She doesn't appear at all depressed by her loss; she must be very wealthy, to bear it with such composure," said one. Those pearls are quite pretty; I suppose she wears them because all her diamonds were stolen. Did yot hear about it ?" said another. "Whom can I get to introduce me ?" I heard a lovely young gentleman inquiring, in the most agitated manner. "Oh, she's so exclusive she knows nobody, and so independent she goes wherever she's a mind to," was the answer. "I know we should have a game time, if I could only get introduced," he said again. Just then he met my eye, and I had a good notion to bow and smile, but concluded I'd better seem more reversed at first, even if I didn't feel so. I was just wishing, with all my heart, that I did know some one that would ask me polka, when I saw the ladies hopping and flying around like a parcel of robins learning to use their legs and wings, now on one foot now on t'other, and then fluttering round and round so delightfully, supported by the elegantest men I ever beheld, with moustaches, and gaiters, and spy-glasses suspended around their necks—I was just wishing and feeling as if I could not remain in my seat another instance, when—oh, Dora, whom should I behold at the other side of the ball-room but—guess who. You never could guess if you should strive for a week. I actually turned faint and thought I should go over, when I realized who it was. Everything got dark, and the music buzzed like a spinning-wheel; but I got over it in a minute, and then my, how mad I was! My blood boiled in my veins! I forgot the heavenly part, everything except that horrid letter; you remember it, Dora—"dear old girl!" Yes, Dora, it was actually Adonis de Mountfort that I saw standing and conversing with the very young gentleman whom I had overheard wishing to be introduced to your humble servant! They had been looking at me, I know, though Adonis turned his eyes in another direction as quick as he could—but his name isn't Adonis, or De Mountfort either, but Albert D. Morton—and pretty soon he looked back again, and stared right straight at me; and I presume he saw how mad I was, and that I was going to have him arrested for embellishment, false pretences and breach of promise. I looked him straight in the eyes—oh, Dora, do you remember what beautiful eyes he had? without flinching, and said to myself, "'Old enough to know better ?' Ha, young man, you'll get your pay for that, now!' when what should he do but just take that other gentleman by the arm, and come across the room, and hold out his hand to me with a smile, and say, as cool as a cucumber, "My friend Miss Slimmens, is it possible this is you ? I am delighted to meet you here, in this congenial scene. How are you ? Not married, I suppose ? Never been able to meet a suitable spirit yet, ah, in this etherial world ? Allow me to take the liberty of presenting to you my particular friend Mr. Bowser. He was dying to make your acquaintance, and was very much pleased when he learned from me that you and I were old friends, my dear Miss Slimmens." I felt as if I should choke with surprise and rage; and I couldn't hardly be mad at him either, he looked so innocent and unconscious, so I just bowed, and was wondering what on earth to do or say—whether to rise up there and cry out "Thief," or pass it by till to-morrow, which would give him a chance to escape—when he bent over and whispered in my ear: "My dear friend, let bygones be bygones ? You don't want it understood here that you are a retired milliner, nor just how you came to lose seven hundred dollars by me; you've come here to make a match; I'll help you. I know everybody and everything, and all about them. The young gentleman I just introduced to you is a rich young Southerner; all the girls are dying for him. You'll be the most envied of your sex. You say nothing and I'll say nothing, and it'll be just the thing. I can get you a large circle of admirers in less'n two days." Before I could reply, Mr. Bowser was pressing me to dance, and I was standing on the floor before I knew it. He danced splendidly. I enjoyed it excessively, in spite of my rheumatiz, and after it was over, I was introduced to several others, and before the evening was ended, I had the gratification of feeling, Dora, that Miss Slimmens, of Pennyville, was the bell of the ball, the observed of all observers. I retired to my room without a single regret for the robbery, and in such a state of flustration that sleep did not visit my pillow till broad daylight.

The next day I made more acquaintances. Some of the ladies were very polite, and consoled with me for my loss, which I told them, carelessly was of no censequence, as my jewelry was not the gifts of friends, except the watch which I should be glad to get back. I found myself getting along so well, and had already the case of the pickpocket to attend to, I made up my mind it was fallacy to let Mr. Morton (alias de Mountfort) go and not have him arrested for a swindler—at least for the present; and, on the whole, I'm rather glad I took the course I did. With so many chances thrown right in my face and eyes, as it were, I preferred keeping it a profound secret that I'd ever bleached bonnets for a living. You know I always had a remarkable genteel air, which has been in my favor; and the way I've pulled and hauled Susan and Caturah around has been of advantage to me in ordering the waiters, who are killingly attentive, in expectancy of what I'll give 'em, which won't be much, if they only know it. I go to the table after almost everybody is there, and I never fail to create a sensation. I see it out of one eye, though I don't purtend to. In the early part of the day, I generally pass my time in the reception-rooms; and I always have a book, and generally a gold pencil and a piece of paper with me, and I adopt a pensile air, suitable to a literary person, as well as something peculiar in my dress, as singularity is a mark of talent. The gentlemen are very fond of conversing with me on intellectual topics. However, as you are not literary, Dora, I suppose you don't care to hear. The politest person in the house to me has been Mr. Morton; he treats me with the greatest reverence before everybody, and says and does the nicest things. He's taken me out to ride twice, and we've been down on the beach every day to see the feminine portion of the visitors bathing; but I won't go in the water myself, for reason's—you know Dora.

Don't think, from what I've said, that I've forgiven him; I haven't and I never shall! I am only acting from fallacy, and so is he, and we understand each other. The acquaintance I think most of is quite another person. He's a widower. I should say about thirty-five; rather small, but dressed more sweetly than any other man in Newport; his dress is exceptionable, from top to toe, and he handles his spyglasses like a person "to the manger born." The only imperfection in his appearance is a slight, a very slight limp, which I suppose is rheumatiz, and which prevents his dancing, which is a great pity. I've understood he has no child-

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MARLTON, N.J.—I feel that Lydia E. Pinkham's Vegetable Compound has given me new life. I suffered for ten years with serious female troubles, inflammation, ulceration, indigestion, nervousness, and could not sleep. Doctors gave me up, as they said my troubles were chronic. I was in despair, and did not care whether I lived or died, when I read about Lydia E. Pinkham's Vegetable Compound; so I began to take it, and am well again and relieved of all my suffering."—Mrs. GEORGE JORDY, Box 40, Marlton, N.J.

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and is worth thirty thousand dol-
I suppose he reckons I'm worth
as much, and I sha'nt take any par-
lar pains to undeceive him. He
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'm expecting every day when he
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t away, Dora, for it costs even more
I reckoned; what with impudent
mbermaids that won't hook up a
lady's dress without they get a half a dollar a time for it, and a quarter for a glass of ice-water, and a dollar a day to the hair-dresser who differs the arrangement of my w-g (burn this, when you get through, if you ever do which is doubtful), each time, and makes it just like a real head of hair. It takes money, and nothing but a good match can repay my outlay. However, I think the sea air is doing me good, and I trust soon to get over the lingering remains of that exterminator. If he don't declare himself before I leave, I shall invite him to visit Pennyville; though I'd rather the matter would be settled before, as he would see then, just what I was worth. What would you say, Dora, to my coming home a bride? Poor Timothy Bethuen would scarcely stand the shock. Be prepared for the best; and tell Susan to bake some pound-cake.

(To be Continued.)

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Spanking does not cure children of bed wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309 Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

If you are suffering from biliousness, constipation, indigestion, chronic headsche, invest one sent in a postal card, send to Chamberlain Medicine Co., Des Moines, Iowa, with your name and address plainly on the back, and they will forward you a free sample of Chamberlain's Stomach and Liver Tablets. Sold by all dealers.

The Art of Being a Wife.

"I was a wife before I was a mother," remarked a woman who has a remarkable husband and remarkable children. "My children never drove my husband out of my mind for a moment. He has always been first." "And the result?" asked her friend with a skeptical smile. "Well," remarked her companion with a happy little laugh, "it has been most satisfactory, as I will show you. I have a place of honor a queen might envy. Think you my children love and revere me less in consequence? Not so. I am the first in their hearts and thoughts. I am the centre from which all draw their inspiration, or think they do. Why? Because I simply kept my first place as the wife and sweetheart of my husband. Our children have always been accustomed to see their father first in their mother's thought, their mother first in their father's thought. They learned instinctively that this love was first, and the love for the children second. Our home is run for the family. But if one person must take precedence, it is the father, because his place and work are of first importance to the home and the world.

"Our children, as you will observe, are well-mannered, because never for a moment do they think themselves of first importance. This has not restricted individual liberty. They have been allowed to choose individually or collectively, where choice affected them only. Never in our home has any important decision affecting the welfare of one or all of our children been the decision of one parent. And in matters of discipline it has been the same. We have always consulted when the welfare of the child demanded it. It is the unity of thought and common interest which has made our family life so satisfactory and happy.

"The greatest mistake a woman can make is to thrust her husband in the background of her thought, or give him a second place in the home. She makes the most serious blunder if she permits him to take the attitude that the children are hers. The wise woman, without contention, compels recognition that the children are theirs, and that the children's best interest can be promoted only when the moral intelligence of father and mother is directing their training.

"The woman who has the fine art of being a wife has usually the fine art of motherhood. But she who first, last and always busies herself with her children, pushing her husband more and more into the background, as the demands of the family increase, is neither wife nor mother to perfection."—R. Winchester.

Honey Cooking Recipes.

SOFT HONEY-CAKE—1 cup butter, 2 cups honey, 2 eggs, 1 cup sour milk, 2 teaspoonfuls soda, 1 teaspoonful ginger, 1 teaspoonful cinnamon, 4 cups flour.

HONEY-JUMBLES—2 quarts flour, 3 tablespoonfuls melted lard, 1 pt. honey, 1-4 pt. molasses, 1 1-2 level tablespoonfuls soda, 1 level teaspoonful salt, 1-4 pint water, 1-2 teaspoonful vanilla.

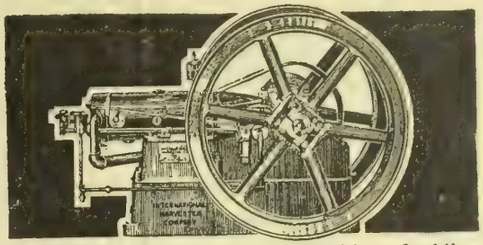
These jumbles and the gems immediately preceding are from recipes used by bakeries and confectioners on a large scale, one firm in Wisconsin alone using ten tons of honey annually in their manufacture.

HONEY-GEMS—2 qts. flour, 3 tablespoonfuls melted lard, ½ pint honey, ¾ pint molasses, 4 heaping tablespoonfuls brown sugar, 1½ level tablespoonfuls soda, 1 level teaspoonful salt, 1-3 pint water, ½ teaspoonful extract vanilla.

HONEY-CAKE OR COOKIES—without sugar or molasses. Two cups honey; one cup butter; four eggs (mix well); one cup buttermilk (mix); one good quart flour; one level teaspoonful soda or saleratus. If it is too thin, stir in a little more flour. If too thin it will fall. It does not want to be as thin as sugar-cake. I use very thick honey. Be sure to use the same cup for measure. Be sure to mix the honey, eggs and butter well together. You can make it richer if you like by using clabbered cream instead of buttermilk. Bake in a rather slow oven, as it burns very easily. To make the cookies, use a little more flour, so that they will roll out well without sticking to the board. Any kind of flavoring will do. I use ground orange-peel mixed soft. It makes a very nice gingerbread.

GINGER HONEY-CAKE—1 cup honey, 1-2 cup butter, or drippings, 1 tablespoonful boiled cider, in half a cup of hot water (or 1-2 cup sour milk will do instead.) Warm these ingredients together, and then add 1 tablespoonful ginger and 1 teaspoonful soda sifted in with flour enough to make a soft batter. Bake in a flat pan.

A RELIABLE POWER IS A FARM NECESSITY



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Your men will be able to turn out twice as much work. They will save time and you will save money, energy, worry and delay.

With an engine, the hired-help problem is simplified—you will be freed from the worry of unreliable, inefficient and dissatisfied help. The efficiency of your other farm machines will be more than doubled. You can operate, at minimum cost, your grinder, fanning mill, cream separator, churn, pump, thresher, huller, cutter and other farm machines without the need of even one helper. You can also have a power-house on your farm, where you will always find a willing power to do your work. You can have electric lights for your home—just belt your engine to a little dynamo. There should be no difficulty about an adequate water supply for fire protection, for general use about your premises, or for irrigation if you find that necessary.

Sit down and figure the price of labor by the year; calculate what it costs to feed a man; include your losses when you could not find help in busy seasons; and it won't take long for an International agent to sell you an

I. H. C. Gasoline Engine

one of the farmers' own line. When he explains its varied uses; its simple construction; how cheaply it can be operated; and how long it will render service, it won't be a question as to whether you can afford one, but how you ever got along without it.

Go to our local agent and look over the line. It includes an engine for every section and every problem; of all sizes and all costs, for all farm uses—vertical and horizontal (both stationary and portable): engines on skids; sawing, pumping and spraying outfits. It also includes I. H. C. gasoline tractors—first-prize-gold-medal winners—the best all-around farm tractor by test. Information regarding I. H. C. engines will be cheerfully given by the local agent; or, if you prefer, write nearest branch house for catalogue, prices and details.

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This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1409 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait—write today. It may mean the saving of your life.

The greatest danger from influenza is of its resulting in pneumonia. This can be obviated by using Chamberlain's Cough Remedy, as it not only cures influenza, but counteracts any tendency of the disease towards pneumonia. Sold by all dealers.

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If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment ; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

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MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, 10th December, 1909, for the conveyance of His Majesty's Mails, on a proposed Contract for four years 6 and 3 times per week each way between CODY'S and COLE'S ISL., AND from the Postmaster General's pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Cody's, Cole's Island and route offices and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent
POST OFFICE DEPARTMENT
MAIL SERVICE BRANCH,
Ottawa, 23rd October, 1909.

N. S. Horticultural Exhibition Prize List.

APPLES.

13 varieties 5 specimens each. 1, Sea View Farm; 2, H. E. Bent, Tupperville; 3, H. D. Johnson, Wolfville; 4, L. E. Healey, Church St, Wolfville.

10 varieties 5 each. 1, H. B. Vaughan Shefield Mills 2 H D. Johnston, Wolfville; 3, Sea View Farm; 4. Mrs. Wm. Sangster Falmouth.

5 varieties, 5 each, 1, L. E. Healey; 2, H. B. Vaughan; 3, John Donaldson, Port Williams; 4, E. H. Bent.

Gravenstein 1, H. E. Bent; 2, H. D. Johnson 3, A. Grevatt; 4, Harriett Tate.

Ribstons, 1, H. E. Bent; 2, W. A. Brown, Greenwich.

Bleuhiem, 1, A. A. Whitman, Torbrook; 2, W. C. Spurr; 3, H. E. Bent; 4, H. D. Johnson.

Kings, 1, H. B. Vaughn; 2, H. D. Johnson; 3, J. L. Longley; 4, Harry Baxter, Lawrencetown

Golden Russetts, 1, L. L. Kinsman; 2, A. Johnson; 3, H. D Johnson; 4, J. A. Magee.

Baldwin, 1, H B. Vaughn; 2, H. E. Bent; 3, J. L Longley; 4, H. V Gates.

Stark, 1, F. Daniels; 2, H. B. Vaughn; 3. H. E. Bent; 4. H. V Gates

Spy, 1, H. V. Gates, 2, W. H. Woodworth; 3. L. A. Vroom; 4. J. Donaldson.

Pallawater, 1, J. A. Magee, Portwilliams; 2, J. Donaldson; 3, H B. Vaughn; J. Parker Dodge, Middleton

Nonpariel, 1, H. E. Bent; 2, H. L. Nelly; 3, J. L. Longley; 4, E. F. McNeil.

Alexander, 1, Harold D'Almaine, Wolfville; 2, L. E Healey; 3, E. T. Neily; 4, A. Johnson.

Banks Gravenstein, 1, L. L. Kinman, Lakeville; 2, W. H Woodworth; 3, F. M. Chipman, Nictuax; 4. H. D'Almaine.

Ben Davis, 1, B. Donaldson; 2, A. Johnson

Bishop Pippin, 1, Sea View Farm; 2, A Johnson; 3, A. D'Almaine, 4. Richard Stevenson, Brickton.

Dudley or North Star, 1, A. Johnson; 2, Sea View Farm.

Gloria Mundi, 1, A. Johnson; 2, Sea View Farm; 3. W. C. Spurr; 4, F. Daniels.

Hubbardston, 1, L. E. Healey, 2, B. F. Chesley; 3, A. Johnson; 4, H D'Almaine

McIntosh Red, 1, K L. Kinsman; 2, A. Grevatt; 3, H. L. Neily; 3, S. N. Jackson, Clarence.

Ontario, 1, H. V. Gates; 2, A. Johnson; 3, F. M. Munro; 4, H. D. Johnson.

Pomme Grise, 1, J. H Pinkey; 2, H. B. Vaughn; 3, L. E. Healey; 4, T. B Messinger.

R. I Greening, 1, H. E. Bent, 2, Cox Bros., Middleton, 3, J. L. Longley, 4, A. Grevatt.

Seeks, 1, A. Johnson; 2, Mrs J. W. Hebb, Lunenburg, 3. C. F. Armstrong, Middleton; 4, R Duncanson, Falmouth.

Talman Sweet, 1, J. Donaldson; 2, Mrs. W. Sangster; R, I. Phinney; 4. G. W. Connlley.

Wealthy, 1, Wm. Balcom, Auburn; 2, L. A. Vroom; 3, W. Ritchie, So Farmington; 4, A. Johnson.

Baxter, 1, J. A. Magee; 2, Mrs. M. S. Parker, Nictaux Falls.

Bietizheimer, 1, S. A. Patterson, Wilmot ; 2, Sea View Farm.

Black Ben Davis, 1, J. L. Longley; 2, W. S. R Gow, Grand Pre.

Cox Orange, 1, A. Johnson; 2, A. D'Almaine.

Esopus Spitzenburg, 1, A. Johnson; 2, H. E. Bent,

Gano, 1, Mrs. W Sangster; 2, S. A. Patterson.

Jewett's Red, 1, J. H. Neily, Brooklin.

Sawyer, 1, A. Johnson; 2, Sea View Farm

Mann, 1, Mrs. Wm. Sangster; 2, Louis Saunders, Middleton.

Peck's Pleasant, 1, Sea View Farm; 2, A. Johnson.

Pewaukee 1, F. M. Chipman; 2, Wm. Balcom.

Red Russett, 1, C. E. Harry Barteaux, Lawrencetown.

Wellington, 1, W. A. Brown; 2, J. A. Magee.

Wolf River, 1, H. L. Neily, Kingston; 2, S. A Patterson.

Sweet Bow, 1, H. D. Johnson; 2, H. D'Almaine.

Vandevere, 1, G. N. Banks, Morristown; 2, Aubrey Whitman. Torbrook.

Transcendent, 1, H D. Johnson; 2, T. H. Chipman, Tupperville; 3, B. F. Chesley.

Hyslop, 1, H. D'Almaine; 2, J. A. Magee; 3, E. F. McNeil.

Montreal Beauty, 1, Harry Bruce, Del's Corner.

Large Red, 1, Mrs. Wm. Sangster; 2, H. D. Johnson; 3, H. D'Almaine.

John Fox & Co., prize, 5 boxes Kings, 1, J. I. Phinney; 2 L. L. Kinsman.

Furness Withy Co, prize bbl. Gravenstein, Ribston, and Kings, 1 J. A. Magee, Port Williams, 2, E. T. Neily; 3, L. L. Kinsman.

B. and J. Shaw prize bbl. Kings, Bleniheims and, Baldwins, 1, E. T. Neily; 2, G. M. Banks, Morristown.

Nickerson & Hart prize bbl., Stark, 1, Capt. C. O. Allen.

A. S. Barnstead prize bbl., Gravenstein, 1, A. Grevatt.

Dr. Soloan prize bbl. Spys, 1, H. V Gates.

Prof. Cummings prize bbl, Northern Spy, 1, E. F. McNeil; 2, S. C Hall, Lawrencetown.

Judge Longley prize bbl. Ribstons, 1, J. H. Neily .

Halifax Cold Storage Co prize bbl., McIntosh Reds, A. Grevatt; , H L. Neily.

Sir F. W. Bordon prize, 6 boxes of apples, 1, E. T. Neily; 2, H. E Bent.

Gourlay Winter Leeming Co. prize bbl. Wagners and Blenheims, 1. L. E. Healey

E. R. Machum prize bbl., Bishop Pippins and Spy, 1, R D. Duncanson.

Wm. Cooper and Nephew prize bbl., Spys, 1, L. Vroom.

N. H. Phinney & Co. prize bbl. Stark, 1, E. T. Neily.

W. C. Parker and F. R. Butcher bbl. Gravensteins, 1, J. S. Marshall, Spa Springs; 2, J. E. Smith.

A. L. Davidson prize bbl. Golden Russets, 1, E. T. Neily.

Mrs. L. A Vroom prize bbl. Talman Sweet, 1, J. Donaldson.

A. W. Allen & Son and F. C. Rand prize bbl. Golden Russets, 1, S. C. Hall; 2, E F. McNeil.

W. J Marshall prize box Bishop Pippins, 1, H. E Bent

H. Layton prize bbl. Kings, 1, H E. Bent,

American House prize bbl. Ribstons, 1, H. E. Bent.

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will make your house and barn ABSOLUTELY FIREPROOF and WEATHERPROOF—reduces your insurance rates and practically eliminates the annual repair bill.

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"EASTLAKE" METALLIC SHINGLES are made from the finest quality galvanized steel—only the BEST and TOUGHEST will hold the bold, clear "Eastlake" pattern. The patented telescopic side lock and gutter make it the EASIEST and QUICKEST to lay, and the COUNTERSUNK CLEAT insures a PERFECTLY WEATHERTIGHT roof.

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"METALLIC" is the BEST interior decoration. It gives a handsome appearance to any room—is SANITARY and WILL LAST a lifetime—never cracks like plaster and wood. Unequalled for offices, stores and residences.

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"METALLIC" ROCK FACED SIDING in either brick or stone design gives a house a genuine brick or stone appearance. It is WEATHER and FIREPROOF and very durable. An artistic, economical siding for implement sheds.

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Our CORRUGATED IRON, galvanized or painted, is of the HIGHEST QUALITY material. The corrugations are PRESSED, one at a time, not rolled, thus insuring a PERFECT FIT. Our "MANITOBA" Steel Siding for large buildings, elevators, mills, store-houses, etc. Over 900 elevators in the Western Provinces are sided with MANITOBA SIDING and roofed with "EASTLAKE" Shingles—a proof of the superiority of "METALLIC."

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We import seeds by the carload and have supplied a number of Farmers' Associations for years, giving the best quality of seeds, at carload prices, our commission being only 5 per cent.

Will the Secretaries of Farmers' Associations and Agricultural Societies kindly bring this matter up, at their next meeting and write us for particulars. S. P. GOUDEY, SEEDSMAN, YARMOUTH, N. S.

A Fountain Pen for $1.00

This Pen point is solid gold 14k, is tipped with ridum, the hardest metal known, the same as found on the highest priced pens. The pen is the same size t other makers charge $4.00 for. The cut is exact size of pen and holder. We are making a specialty of this pen. It will be mailed to you for a **one dollar** . If not satisfactory your money will be refunded. Each pen is fully guaranteed. We refer you to the publishers of this paper.

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This is a splendid collection of favorite old-time songs and ballads—songs that touch the heart and recall the tenderest memories, many of them having been popular favorites for forty or fifty years and just as dearly loved to-day as when they were written. Each song is published in this book with both words and music complete and we question if there ever has been issued a book containing so large a collection of sterling favorities at low a price. We will send this book post- d to any address on receipt of 15 cents. RE MARKABLE OFFER—We issue a special e of popular-priced novels by such famous hors as Conan Doyle, Mrs Southworth, "The chess," Alexander Dumas, etc , etc. Send us ty cents for a trial order of a dozen boo rs and will include the Song Book free of charge. is offer is for a limited time only. Address orders

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All our customers are satisfied cus- mers. S. P. GOUDEY, Seedsman, armouth.

W. G. Pearsons prize bbl, Golden Russets, 1, J. A. Magee.

Parsons Elliott Co, prize bbl, Spys, 1, R Duncanson.

J. H. Charton prize bbl, Blenheims, 1, H. L. Neily.

F. E. Bentley prize bbl, Nonpariels, 1, E. T. Neily.

A. A. Daniels, prize bbl. Fallawaters, 1, H. V. Gates.

W.C Feindel and E.R. Butcher prize bbl. Spys 1, E. F. McNeil.

J. A. Bancroft prize bbl. Baldwins, 1, T. Neily.

Geo Dixon prize bbl Kings, 1, E H. Bent.

L. R. Fairn prize Bishop Pippins, 1, R. Duncanson.

A. S. Brown prize bbl, Nonpariels, 1, E. T. Neily.

Central House prize bbl. Hurlbosts, 1, Capt. C. O. Allen.

Col. S. Spurr prize bbl, Gloria Mundi, 1, W C. Spurr.

S. E. Boncroft prize bbl, Gravensteins and Baldwins, 1, E T. Neily.

S W W Pickup, prize bbl, Golden Russets and Ribstons, 1, E. T. Neily.

H L. Cole prize bbl. Pomme Gris, 1, Cox Bros

Chas. Smith prize bbl, Bishop Pippins, 1, H. L Neily

Capt C. O. Allen prize bbl. box Cox Orange, 1, Capt. C. O Allen.

J. O. Sims prize 3 boxes apples, 1 E. T. Neily.

J. B. Black and W. Anthony prize bbl. Gravensteins, 1, J. Donaldson; 2, H. Grevatt.

Jas O'Brien and J. W. Dodge & Son, prize bbl. Golden Russets, 1 R Duncanson.

John Doran and F. C. Manning prize bbl Bishop Pippins, 1, G. M. Banks

W. H. Roach, prize box Golden Russets, 1, E. T Neily.

W. H. Roach prize box Kings, 1, H. E. Bent

G. F Freeman prize bbl, Pomme Gris, 1, H. B. Vaughn.

F. C. Whitman, prize 10 plates apples, 1, J. S. Longley, Paradise.

J. H. Potter prize bbl. R. I. Greenings, 1, J. H. Neily.

J. B Thomas prize 6 bbls Ribstons, Blenheims and Kings, 1, E. T. Neily.

CLASS I.—PEARS, PLUMS AND PEACHES, ETC

10 varieties pears, 1, H. D. Johnson; 2, Sea View Farm; 3, A H Johnson.

5 varieties pears, 1, H. D. Johnson; 2, G. M Banks; 3, Sea View Farm.

Bartlett, 1, J. Donaldson, 2 H. D'Almaine; 3 J. H. Neily

You Are Taking No Chances

when you buy a pair of

NATIONAL OR IRON DUKE OVERALLS

Because we guarantee every garment, nor do you pay a higher price for it because of the guarantee.

If your merchant does not handle them, ask him to order a pair for you.

The Maritime Hat and Cap Co.,
Manufacturers, - TRURO, N. S.
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PURITY FLOUR

Use it for bread, pies, cakes, biscuits, everything

It's the champion all-purpose brand.

Western Canada Flour Mills Co., Limited.

17

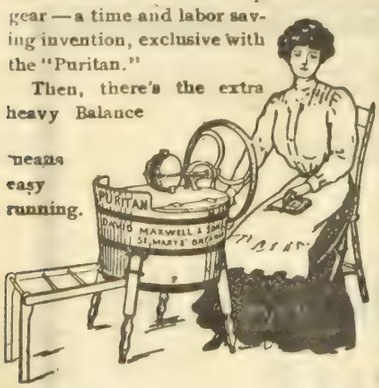
"Puritan"

Reacting Washing Machine

The machine with the improved roller gear—a time and labor saving invention, exclusive with the "Puritan."

Then, there's the extra heavy Balance

means easy running.



"Puritan" Washers take all the work out of washday. Write us if your dealer does not handle the "Puritan".

"Favorite" Churn

You can churn with your hand — with your foot — or both together, with the "Favorite". Easiest churn you ever used. Roller bearings make it so. In 8 sizes churns from ½ to 30 gallons of cream. Ask your dealer to show you the "Favorite", or write us for full description.

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"Buco" Hand Cultivator does twice the work of Hoe in less time, less labor, trouble; more thoroughness. Digs deeply, extracting weeds by roots. Adjusted to any width for working around vegetables, etc. 4¾ ft. hard-wood handle; thoroughly tempered best steel Teeth. Simple, durable; lasts a lifetime; saves its own price many times first season. Sold by Hardware and Seed Stores. If dealer cannot supply you, send regular price, $1.50, and "Buco" will be promptly sent you. Money refunded after 10 days trial if it is not satisfactory.

"Buco" Hand Cultivator.

Bailey-Underwood Company, Ltd.
New Glasgow, N.S., Canada.

MAIL CONTRACT.

SEALED TENDERS addressed to the Post master General, will be received at Ottawa until Noon, on Friday, 3rd December 1909, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, three time per week each way, between HATFIELD POINT and TOOLETON, from the first of February, 1910.

Printed notices containing further information as to conditions of proposed Contract may be seen and bank forms of Tender may be obtained at the Post Office of Hatfield Point, Tennant's Cove, Beulah, Downeyville, Belleisle, Toolston and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, 20th October, 1909.

Boussock, 1, A. Johnson; H. D. Johnson, 3, Sea View Farm.
Bosc, 1, Sea View Farm; 2; H. D'Almaine; 3, B. F. Chesley.
Clapps, 1, S. Donaldson; 2, J. H. Neily; 3, B. F. Chesley.
Clairgeau, 1, H. D'Almaine; 2, H. D. Johnson; 3, H. E. Bent.
Cornice, 1, A. Johnson; 2, Sea View Farm; 3, H. D. Johnson.
D'Anjoiu, 1, J. Donaldson; 2, Sea View Farm; 3, H. D Johnson.
Duchess, 1, A. Johnson; 2, Sea View Farm; 3, H. D. Johnson.
Flemish Beauty, 1, Harry Bruce; 2, H. E. Bent; 3, H. D'Almaine.
Howell, 1, A. Johnson, 2, E. H. Bent; 3, Sea View Farm.
Louise Bonne de Jersey, 1, Sea View Farm; 2, E. H. Bent; 3, H. D. Johnson.
Onondaga, 1, H. D. Johnson; 2, A. H. Johnson; 3, T. H. Chipman.
Sheldon, 1, H. D. Johnson; 2, A. H. Bent; 3, H. D'Almaine.
Vermont Beauty, 1, S. E. Shaw, Wolfville.
10 varieties plums, 1, A. H. Johnson; 2, B. F. Chesley; 3, J. Donaldson.
5 varieties plums, 1, A. H. Johnson; 2, B. F. Chesley.
Abundance, 1, J. Donaldson.
Bradshaw, 1, J. Donaldson; 2, H. E. Bent; 3, B. F. Chesley.
Burbank, 1, J. Donaldson.
Coe's Golden Drop, 1, A. H. Johnson.
Damson, 1, A. H. Johnson; 2, J. D. Smith, Wolfville.
Golden Prolific, 1, J. E. Smith; 2, B. F. Chesley; 3, A. H. Johnson.
Grand Duke, 1, J. Donaldson; 2, A. H. Johnson; 3, Sea View Farm.
Imperial Gage, 1, J. Donaldson.
Magnum Bonum, 1, A. H. Johnson; 2, B. F. Chesley; 3, H. E. Bent.
Monarch, 1, Sea View Farm; 2, A. H. Johnson; 3, W. A. Brown.
Lombard, 1, W. A. Brown; 2, A. Johnson; 3, Sea View Farm.
Pond's Seedling, 1, Mrs. W. Sangster; 2, Sea View Farm; 3, J. I. Phinney, Spa Springs.
Reinie Claude de Bavay, 1, J. Donaldson; 2, A. H. Johnson; 3, J. E. Smith.
Washington, 1, J. Donaldson.
Moor's Artic, 1, J. Donaldson.
Collection plums correctly named, 1, H. D'Almaine; 2, B. F. Chesley.
Plate plums, 1, G. E. Jacques, Wilmot; 2, W. A. Brown; 3, N. W. Beckwith, Nictaux.
Orange, 1, C. Neily, Del's Corner; 2, S. N. Jackson; 3 J R. Smith.
Rea's Mammoth, 1 A. Johnson; 2, B. F. Chesley, 3, Mrs. W. Sangster.
Meache's Prolific, 1, A. Johnson; 2, H. D'Almaine; 3, H E. Bent.
Champion, 1, Mrs. C. L. Baird; 2, A. Johnson; 3, E. F. McNeil.
Collection grapes correctly named, 1, B. F. Chesley; 2, Mrs Sarah E. Starr.
Campbell's Early, 1, B. F. Chesley.
Champion, 1. B. F. Chesley.
Delaware, 1 B F. Chesley
Moore's Early, 1, Mrs. S. E. Starr; 2, B. F. Chesley.
Niagara, 1 B. F. Chesley; 2, H. D'Almaine.
Concord, 1 G. B. McGill.
Quart Cranberries, 1, Mrs. F. Daniels; 2, E. T. Neily; 3, C E. Dodge, Berwick

Selection of Fruit for Exhibits.

(Continued from page 53.)

ored specimen. Such specimens often contain a worm, although no indication of its presence is visible on the outside, and, a few days later, when the apple is on the exhibit table, the worm crawls out.

The fruit should be picked so careful that no bruise will show. Care in picking, handling and packing cannot be emphasized too strongly. A small bruise may not be noticed at the time of packing but will show plainly a few days later. Many a plate of fine fruit has failed to win first prize because of bruises.

FRUIT SHOULD NOT BE POLISHED.

Fruit for the exhibit should never be polished. It is the belief that a polished speciment is much more attractive. To the casual observer this may be true but to the grower such is not the case. Every fruit is covered with a light bloom which is just as much a part of that fruit as is the color or any other character. Polishing removes that bloom and detracts just so much from the appearance. Judges usually discount for polished fruit.

NUMBER OF SPECIMENS.

The various associations differ as to the number of specimens required for a single plate. The Horticultural Societies and the large State Fair Associations however, are agreed and these regulations should be made general. They require for apples, pears and peaches, five specimens to a plate. For plums, the bottom of a six inch plate covered. For grapes, three bunches to a plate.

PACKING.

The fruit should be packed carefully so that it will not bruise in transportation. An excellent method is to put the five specimens for a single plate and the

A Crayon Enlargement, 18 by 24 inches, of one of the best photographs of the late Rev. Father Morriscy, the renowned priest-physician, has been prepared for admirers of the priest himself or of his wonderful prescriptions. Better even than the small reproduction above, it is a very handsome picture, worthy of framing. The Father Morriscy Medecine Co., Ltd., of Chatham, N.B., will be glad to send an enlargement, absolutely free, to each one who writes for it. 73

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS

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I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day as you may not see this offer again. Address:

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Perfect Maple EVOPARATOR

Price low—quality high—product, the best possible—the kind you like—svrup retains its maple taste—all unnecessary and middlemen's profits cut out—sold at a price the poorest man can buy. Every one guaranteed—Write for pamphlets and recommends. Do it now. Special discounts allowed to cover freight to the Maritime Provinces. Order early, very important.

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COWS GIVE MORE MILK

---cattle make better beef---Bulls are no longer dangerous when dehorned with the

KEYSTONE DEHORNER.

Cuts 4 sides at once---No crushing or bruising. Little pain. The only humane method. Write for free booklet. R. H. McKENNA
219 Robert St. Toronto, Ont. Late of Picton, Ont.

Dates to Remember.

Maritime Winter Fair, Amherst, N. S., December 6, 7, 8 and 9th, 1909.

Annual meeting of the Maritime Poultry Association, Winter Fair Building, Amherst, N. S., Dec. 8th at 1 A. M.

Prince Edward Island Poultry Show, Charlottetown, P. E. I., January 5, 6, 7 and 8th, 1910.

Dominion Exhibition, St. John, N, B, September 5th to 14th, 1910.

Charlottetown, Exhibition, September 20th to 24th, 1910.

Halifax Exhibition, September 28th to Oct 6th, 1910.

Many persons find themselves affected with a persistent cough after an attack of influenza. As this cough can be promptly cured by the use of Chamberlain's Cough Remedy, it should not be allowed to run on until it becomes troublesome. Sold by all dealers.

iety label in a Manilla sack. It is necessary to wrap the individual ecimens, although this is some times ie with the tender fruits, and where eat care must be taken to prevent iises. The sacks cotaining the varie- s are packed firmly in barrels of ckages, which are well lined with shions of paper or other flexible terial.

How Fruit is Judged.

Until recently no systematic methods judging has been followed. The ige would carefuily examine the dif- ent competing plates and then award e prizes, basing the decision on his n opinion of the points of merit. iese decisions were unsatisfactory to e exhibitor. An effort to secure uni- rmity in the work resulted in the lection of important characters to nich relative values were assigned. though these characters and values ay vary slightly in the case of differ- t associations they may be of some lp to the exhibitor in selecting his uit.

These characters and values are as llows:

orm	15	15	10
ze	10	10	15
olor	20	15	15
niformity	20	20	20
uality	15	20	20
reedom from Blemish	20	20	20
	100	100	100

Sign Your Name.

We frequently receive letters containing small sums of money and other communications to which no signatures are affixed. Be sure and sign your name and address when writing the Maritime Farmer as it is impossible for us to credit any amounts received unless the sender's signature is affixed. We have several small sums on hand now that we cannot credit until we hear from the senders.

How May Tattoo Marks be Removed?

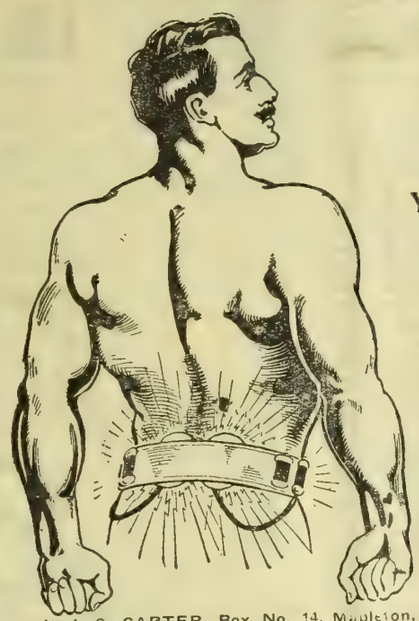
Dr. Variot adopts the method of pouring on the marks a concentrated solution of tannin and work it into the skin by a series of pricks just as in tattooing proper. A certain quantity of tannin is thus introduced beneath the skin. He then rubs the part with nitrate of silver and allows the solution of the salt to remain in situ until the prick marks show out as black points. The caustic is then wiped off and the result is the formation of a black stain of tannate of silver. Inflammation is set up, and in the course of a fortnight scabs form, on the disappearance of which no trace is left of the original design, the only souvenir being a reddish scar, which in time becomes less visible. Various other methods have been tried with more or less success, as scarification, the introduction of opaque powders and caustics into the skin, etc., but the author quoted says that none of them produce satisfactory results. The tannin, in his operation, acts as a mordant, and in no case did he have to deal with troublesome suppuration, although if the area be large it is well to do a piece at a time.—Practical Druggist.

Fumigating Powder.

Frankenceuses, 3 ozs; benzoine, 3 oz; amber 5 ozs; lanvender flowers 1 oz; mix. This is designed to be ignited upon coals, a stove, or hot iron to diffuse an agreeable aromo in an apartment, and incidentally to destroy noxious effluvia.

Aikin's Honey-cookies—1 teacupful extracted honey, 1 pint sour cream, scant teaspoonful soda, flavoring if desired, flour to make a soft dough.

"ELECTRICITY IS LIFE"



If you want to get up in the world and make your mark; if you want to be pointed at as a successful man; if you want to be a Man among men, you must be full of electricity—magnetism.

Brooding over your trouble—spending hours and hours regretting your past follies and mistakes—despairing of help will not add to your capital of nerve power—will not help you down the shadows and get you into the sunlight of happiness and success.

You aren't the only fellow after the plums—the high places. Thousands are in the strife, and the prizes go to the wide-awake—the men of courage and energy.

Life is made of hurry and worry, hard knocks and excitement.

You Have Heard it Said That Opportunity Knocks But Once in a Lifetime

The fact is, she makes several calls, but she docsn't come with a brass hand to wake you up

Nature carved you in the image of a man, a man you can be, as we can show you the way.

If you have fallen by the wayside, if you have succumbed to temptation and folly, if you have exhausted your vitality through excesses, overwork or worry, use your God-given brains and judgment for a few moments.

Take an inventory of yourself. Seek the truth. Study your weakness. Don't further wreck your nervous system and befuddle your brain with drugs, stimulants, but use that great wondrous power. **Electricity,** as I apply it with

Dr. McLaughlin's Electric Belt

I can point to hundreds of men to-day who came to me broken in health and spirit—absolute physical wrecks, hopeless, despondent who followed my advice, used my Belt, regained their strength and vitality, and are now getting on in the world. Many of them say that my Belt saved their lives.

Wm. S. Carter, Box No. 14, Mapleton, Ont., says: "I have worn one of your Electric Belts for three months as directed, and am very much pleased with it. It has done more for me than I expected, and I feel that I am perfectly cured. I cannot speak too highly of it, and hope that it will do as much for others as it has done for me. I will strongly recommend it to all people suffering from aches and pains."

J. Harry Denton, Trenton, Ont., says: "I used your Belt for nervous debility and rheumatism in 1903, and it cured me. I wrote at that time to this effect, and what I said then I can verify now. I am enjoying better health at the present time than I have done for many years. I would recommend the Belt to any one suffering from rheumatism or from any form of nervousness."

J. Largess, Box 53, Vankleek Hill, Ont., reports: "The lameness in my back is all gone, the Varicocele is better, and I am getting better health generally, and have gained a good deal in weight."

Jas. Hatt, Beach Hill, N.S., says: "The pains in my chest and back are all gone, and I have gained fifteen pounds in weight. It is a pleasure to say that I have at last found a remedy that would cure me of my aches and pains."

A DOCTOR'S GIFT TO THE SICK AND WEAK

To the people who want to be strong, who want to feel like they did when young, I offer a book which will show them the road to happiness—a book of 80 pages, which is brimful of the things they like to read, which will give them courage and enlighten them as to the cause and cure of their troubles. It will point out the pitfalls and guide them safely to a future of strength and vitality. It is beautifully illustrated. It tells what other people have suffered and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will mail me this coupon. If you are not what you ought to be, send for it to-day.

FREE

BOOK FOR WOMEN
BOOK FOR MEN

Get my 80-page book describing my treatment, and with illustrations of fully developed men and women, showing how it is applied.

This book tells in plain language many things you want to know, and gives you a lot of good, wholesome advice for men. I'll send the book, in plain wrapper, prepaid, free, if you will inclose this coupon.

I want to convince every sufferer that he can get benefit from my treatment. Nobody should be without it, for it is cheap enough, far cheaper than a course of doctoring, and I want everybody to try it. Let every sufferer who can do so call at my office and make a full test of my battery free of any charge.

If you can't call, send this coupon for my book.

Office hours: 9 a.m. to 6 p.m. Wednesday and Saturday till 8.30 p.m.

M. K McLAUGHLIN
214 St. James St., Montreal
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Please send me your Book free.

NAME .....

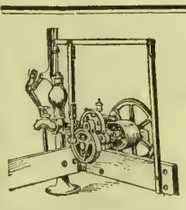
ADDRESS .....

During the first few days of a "slight" cough your health trembles in the balance. Serious Consequences may follow neglect, yet a few pleasant spoonfuls of

SIMSON'S FLAXSEED EMULSION

will speedily drive it away before it becomes dangerous. Twenty-Five Cents a bottle at all good dealers—but insist on getting SIMSON'S, the genuine Flaxseed Emulsion.

THE NATIONAL DRUG & CHEMICAL CO., OF CANADA, LIMITED, HALIFAX, N. S.



Water Pumping, Gasoline Engine $55.00.
Free Circulars.
Guarantee Motor Co.
72 Bay St., North,
Hamilton, Ont.

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Help for Those who Have Stomach Trouble.

After doctoring for about twelve years for a bad stomach trouble, and spending nearly five hundred dollars for medicine and doctors' fees, I purchased my wife one box of Chamberlain's Stomach and Liver Tablets, which did her so much good that she continued to use them and they have done her more good than all of the medicine I bought before.—Samues Boyer, Folsom, Iowa. This medicine is for sale by all dealers. Samples free.

Have you read every ad in this issue?

Are you a member of your local Agricultural Society?

Are you preparing to attend the Agricultural College Short Courses?

DIP YOUR SHEEP

Stockmen and farmers who use the Cooper Dips have healthier animals—get more wool and better prices. More than half the cloth and flannel of the world is made of Cooper dipped wool. Tanks supplied at cost to all users of the Cooper Dips.

COOPER'S POWDER DIP

The leading sheep dip for 65 years. Used on 250 million sheep every year. Kills ticks, lice, nits and eggs in one dipping. Does not stain the wool, but increases the yield and improves the quality.

Prices 25 gal. pkt. 50c., 100 gal. pkt. $2.00.

COOPER'S FLUID DIP

for all animals. A highly concentrated, non-poisonous fluid dip of marvelious strength Mixes readily with cold water, whether hard, brackish, or salty. The only pure liquid dip—no sediment. Goes farther than Coal Tar dips and, therefore, cheaper. Positive remedy for scab, mange, ticks, lice, ringworm, eczema, sores, bites, stings etc. One gallon makes 200 gallons for general dipping, or 300 gallons for disinfecting.

Price—Qt. can 75c. 1 gal. can $2.00, 5 gal. can $8.50.

COOPER'S WORM TABLETS

A sure remedy for intestinal worms in Horses Sheep, Cattle and Hogs. These tablets offer the great advantage of correct doses and certain results. Dose—one tablet for lamb or shoat, two for sheep or hogs, three for horses and cattle.

Price—10 tablets 20c. postpaid, box of tablets, 200, $1.00, postpaid.

COOPER'S "LAVENE"

The most effective skin dressing for Horses, Cattle and Dogs. Cures worst cases of Mange and Ringworm at one dressing. Searches the skin and attacks the disease at its root. Improves the coat and renders hair soft and glossy. Is used by many of the best breeders in preparing animals for show.

Price Qt. can $1.00, Gal. can $3.00. CANADIAN DRUG CO., LTD., ST. JOHN, N. B.

F. C. WESLEY CO.

ARTISTS,
ENGRAVERS,
and
ELECTROTYPERS.

59 Water Street,
St. John, N. B.

NO LONGER TROUBLED.

A Sergt.-Wheeler in R. C. Finds Cure from Agonizing Skin Disease.

Sergt. Wheeler Thos. P. Bennett, R. C. A., who lives at 705 Albert St., Ottawa, describes the relief which he got from D. D. D. Prescriptions :

"It give me pleasure to commend D. D. D. to sufferers from skin diseases For three years I suffered intensely from a skin disease which I developed on the back of my neck. It grew continually and sometimes cast off scales. Neighbors' advice, prescriptions, salves and expensive blood medicines were lavishly used.

At last I found relief in D D. D., used acording to directions. It required just one bottle to effect a cure. I am no longer tortured so I have no hesitancy in acknowledging to the world the worth and great virtue of D. D. D

Blood medicine cannot kill the germs in the skin which cause eczema and other skin diseases. Salves fail because they cannot penetrate. D. D. D. goes right into the pores, kills the germs and cures.

For free sample bottle of D. D. D. Prescription write to the D. D. D. Laboratory, Department F. M., 23 Jordan St., Toronto.

For sale by all druggists.

FITS CURED For proof that fits can be cured write to Mr. Wm. Stinson, 134 Tyndall Ave., Toronto, Ontario, for pamphlet, giving full particulars of simple home treatment 20 years' success. Over 1 000 testimonials in one year. Sole proprietors.

Trench's Remedies, Ltd., Dublin

F.B. McNUTT & Co.,

Marble and Granite Dealers,
Queen St. Truro, - - N. S.

FLORICULTURE.

Mrs. A. T., of Chipman, N. B., writes: Please tell me what the best variety of ferns would be for a parlor? There would be no sunlight, but the rooms are warm and large windows admit plenty of light. I have tried the Scotch Fern with indifferent results. Will the Boston Fern thrive under such conditions. I am told they require sunshine to succeed.

Ans. You should have good results with Boston Ferns under conditions named. This class of Ferns do not require much sunlight, in fact I have seen some fine specimens in this city that have never seen the sun. If you desire a large fern get the old Boston or any of the piersoni barronsi or any of the so called Ostrich Plume type. On the other hand, if a short, compact bushy plant is desired, the new Scott Boston Fern is best, but remember, that where there is heat, plenty of moisture about the foliage is absolutely necessary, or washing at least once a week, also a good drainage is imperative.

A., of St. John, writes :—Is it proper to cut down Paeony tops at this season of the year or is it necessary to cut them down at at all? Is straw or brush the best protection for them, and when should it be applied? I planted a number of small roots last spring, they have grown fairly well, but have not bloomed. Is that right?

Ans. It is not necessary to cut the tops, but doing so makes it more convenient to cover the roots with strawy manure, which is better than either straw or brush as it fertilizes, as well as protects. Cover the roots about the first of November. Newly planted Paeonies seldom bloom the first season. If you have had good growth it is all you can expect.

Primrose, of St. John, writes :—I have a small Primrose plant, lilac shade, it grows well, but I find the underside of the leaves covered with little white flies that are very agile. I also find these flies on some little Geraniums in the same window. Will they hurt the plants and if so how can I destroy them? One of my neighbors complain of these same flies and think that they are injuring a Calla Lily.

Ans. The white fly is a most persistent pest and one not easily killed. Their damage is, however, not so great as their number would imply. Dust the plants thickly with Pyrethrum insect powder and kill all you can of those that fly about, wherever you find them. They are usually more troublesome in the spring when, if you put the plants out of doors, they will immediately leave the plants for the more tender weeds. In this manner you can easily get rid of them. We seldom have a complaint of these pests in the fall.

Now plant bulbs and hardy plants or the hardy varieties of shrubs. The heavy frosts of the last few nights have hardened such up nicely and early planting will enable them to become nicely set in the ground before the soil freezes. Every little garden should have a few clumps of little blue flowering Scilla. It is as hardy as a dandelion and the flowers come with the Crocus the first thing in the spring. If you once get them in the ground you can depend on them blooming year after year without any attention whatever.

Mr. R., of Chatham, writes :—Would it be advisable to plant a Lilac hedge this fall and should manure be put in the trench in which they are planted? Is the Crimson Rambler a hardy rose tree and would it grow well against a verandah? Does it require a rich soil? What would be a safe covering if planted, this fall?

Plant the Lilac hedge at once. Do not put any manure in the trench unless thoroughly rotten, better put on top of ground after the shrubs have been planted.

Ans. Crimson Rambler is certainly very hardy and does well nearly everywhere. It makes an ideal climbing rose for our climate as it grows quickly. It would be a good plant for a verandah post. The richer the soil the faster it grows,

Pays for itself in fuel saved

Don't allow a few extra dollars to prevent you from taking the perfect-cooking, sure-baking, easily-regulated Pandora in place of a cheaper stove. In a season or two Pandora will pay the difference in the fuel it will save—and it will keep on saving until it has paid for itself. 20

Pandora special flue construction makes fuel do double duty. Wide fire box is another fuel-economizer. The steel oven heats quicker than a cast oven, thus saving still more fuel. Further economizing features will be explained by the McClary Agent.

Pandora Range

McClary's

MAGIC

Used by the best Bakers

and Caterers everywhere also by Chefs in the large hotels and on Dining Cars, Steamships, Steamboats. etc.

It is wise to use food products that are produced in clean factories.

E. W. GILLETT CO. LTD.
TORONTO, ONT.

BAKING POWDER

All Ready.

Yes, we are all ready with a Fall stock of Men's Footwear that deserves your attention, if you give any thought to matters of "correctness."

All the new creations in leather and shape that have been marked "approved" by those whose approval settles the styles.

Particular men will find here just what they want in Footwear. This is a Shoe Store that is especially conducted for particular people. The Laboring Man, the Business Man, or the Swell Dresser will find that we give his particular shoe wants the most careful attention.

WM. TAYLOR & CO., Limited.
"Shoe Men."
156 Granville St., HALIFAX, N. S.

Goes Like Sixty

Sells like Sixty
Sells for Sixty-five
$65

A perfect engine for pumping, grinding, sawing wood, corn shelling, churning, washing machines and all farming purposes. Larger sizes for feed cutting, threshing, silo filling, and all heavy farm work.

GILSON GAS AND GASOLINE ENGINE

FREE TRIAL—WRITE FOR CATALOG—ALL SIZES

Gilson Mfg. Co., Ltd.
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KNITTING MACHINES
HOME MONEY MAKERS

Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—Q. R. S. T.

Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS. 2
Box 596 GEORGETOWN, Ontario.

Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle, deliv'd. Book 8 D free. ABSORBINE, JR., for mankind, $1. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Book free. W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass. LYMANS Ltd., Montreal, Canadian Agents.

Gold Watch Free!

A Lady's or Gents' Solid Gold-filled Watch Free for selling 10 boxes of Dr. Marcil's famous Compound Pills, at 25c a box. They are the greatest remedy for the cure of indigestion, constipation, impure blood, liver and kidney diseases and all female weaknesses. With the pills we send ten articles of jewelery to give away with the pills, which helps you to sell. Send us your name and address and we will send you the pills postpaid. When you have sold them send us the money, $2.50, and we will send you a Lady's or Gent's Stem-wind or Stemset Watch. We are giving these watches to advertise our remedies. This is a grand opportunity to get a valuable watch free. Write to-day.

The Dr. Marcil Medicine Co.,
Dept. A., Toronto, Ont.

When writing advertisers please mention the Maritime Farmer.

but I would not have the ground too rich as you sacrifice bloom to growth. After planting this rose, cover thoroughly with brush, I think it makes the best protection for the tops.

STOCK NOTES.

PURE BRED CLYDESDALES.—We wish to call the attention of our readers to the advertisement on another page announcing an auction sale of pure bred Clydesdale mares and stallions The Advertisement is self explanatory and we trust as many of our readers as wish to procure a Clydesdale mare or stallion will take the opportunity of visiting St. John on the day of the sale. We feel confident that there will be some excellent stock offered and one will have a good opportunity to secure his choice out of such a large number as will be offered. The New Brunswick Department of agriculture approves of the importation and sale and is ready to pay the freight from the sale ring to your home on your purchases as will be seen by the announcement on another page. Read the ad.

THE HAMPTON STOCK FARM has a neat printed list ready, giving a description of a few pure bred Ayrshire bulls, which they are desirous of selling to make room for wintering their stock, and consequently will offer this stock at a very low price before the season closes, They are close to Hampton station and the stock can easily be inspected.

The PUBLISHER'S DESK.

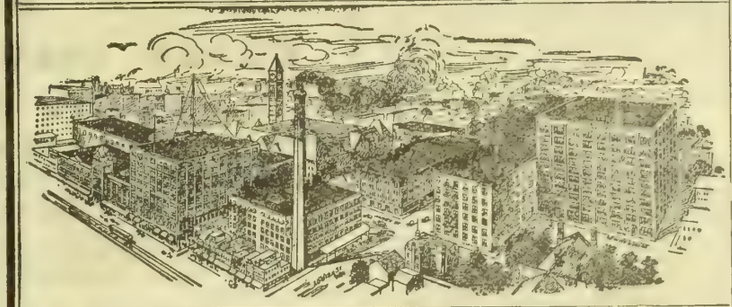
FREE SAMPLE OF AMATITE.—Many of the readers of this paper may not know that the makers of Amatite Roofing distribute free samples for the information of prospective purchasers. Some of our readers have probably doubted that a roofing could be made which would need no painting, and the sample of Amatite is convincing evidence that the practical mineral surface has been invented. Sending for the free sample does not entail any obligations and there is no charge—not even for postage. With the sample is sent a little book telling all about Amatite and showing pictures of roofs in all parts of the country where Amatite has given protection without painting for many years. Just drop a postal card to the nearest office of the Carritte-Paterson Mfg. Co Ltd., St. John, N. B., Halifax, N. S.

HUNTING FOR BIG GAME.—The Highlands of Ontario is an ideal spot for the sportsman during the open hunting season for big game. In the Temagami region moose are plentiful and may be killed during the period from October 16th to November 15th This territory is a forest preserve of vast expanse, and in addition to being the hunters paradise, its waters abound with game fish of many species. The home of the red deers is located somewhat to the south of Temagami, particularly in the districts known as "Muskoka Lakes," "Lakes of Bays," "Magnetawan River," "Lake Nipissing," and "Kawartha Lakes," territories. Write to A. Quinlan, Depa., Montreal, for copy of "Haunts of Fish and Fame" issued by the Grand Trunk Railway System which only describes the hunting territories reached by this line, giving game laws, maps and all information.

EDITOR MARITIME FARMER—We recently finished considering a report made by Inland Revenue Department of Dominion Government on the very important subject of Cream Tartar. Realizing that this article is one which is used universally throughout the Dominion, and one that can very easily be adulterated and tampered with, we have made it our special business to see that all goods of this kind put out by this Company have been chemically pure. Report referred to shows that an improvement in the quality of this article is gradually being made, and this of course means that concerns in the business are not carrying on their adulteration methods to as great an extent as formerly. Any of your readers interested in this question can see, however, that the present state of affairs is bad enough if they will consult Bulletin No 180 of Inland Revenue Department, and at the same time can see at a glance that goods with this Company's name on are chemically pure, as represented, and the only samples of all the tests reported as being 10%. A very large number of samples were collected by the Government Inspectors, and over 20% were found to be composed of alum, lime, phosphoric acid, etc., and containing no cream of tarter at all. As the subject of this letter should be of interest to a large number of your readers, we hope you may find space to publish it. E. W. GILLET CO. LTD.

During the past month a party of editors representing some of the most important agricultural papers in the United States have been touring Western Canada, and on reaching Winnipeg on their return trip from Edmonton over the line of the Grand Trunk Pacific Railway, writes Mr, Chas, M, Hays, President of the Grand Trunk Pacific, at Vancouver, who is also in the West on a tour of inspection of the new line in company with Sir Charles Rivers Wilson, President of the Grand Trunk Railway System and party as follows. We believe that every foot of the land traversed by the road is eminently adapted to grain growing, mixed farming or the keeping of livestock, and that it must soon develop into a region of prosperous homes. We also unite in expressing our admiration of the high character and the completeness in the construction of the road and road-bed, which must soon give the road high

EATON'S
THE GREAT MAIL ORDER HOUSE



IF YOU CONSIDER STYLE—remember—that there is an immense amount of satisfaction gained by wearing a correctly shaped, stylishly made garment. **EATON** clothing can be worn by the most fastidious with the utmost feeling of assurance. It is properly made in every detail and its attractiveness increased by the price saving afforded.

IF YOU CONSIDER PRICE—remember—that we are price makers. Many of the lines we sell are of our own manufacture, which assures superior material, style and workmanship and the elimination of all middlemen's profits. Our store is known as the home of Canadian economy, and every money-saving opportunity we afford is placed within your reach through our Great Mail Order Service.

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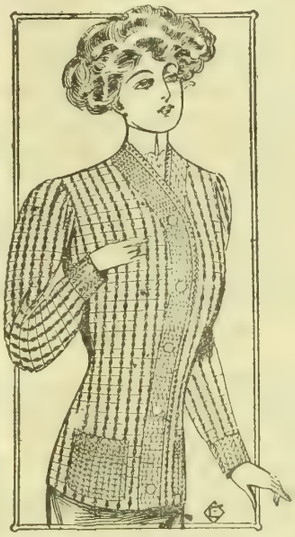

Handsome Knitted Worsted

PRICE

$1.75

T103A. An unusual pony coat value of fine knitted worsted; made with a double edge around the neck and down the front, has a pocket either side. The style is single breasted, closed with five large pearl buttons. It has turn back cuffs knitted plain. This is a very handsome coat in honey comb stitch. Sizes are 34, 36 and 38 bust. Colors—Grey with cardinal, also plain grey, navy or cardinal. **1.75**

EATON Price

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WE WILL SEND FREE and postpaid to any address our Fall and Winter Catalogue upon receipt of your request. It lists Paris and New York exclusive styles at popular **EATON** prices. In fact our values will not only surprise but delight you.

WRITE FOR THIS BOOK TO-DAY. DO IT NOW

THE T. EATON CO LIMITED
TORONTO DEPT. 72 CANADA

CANCER

R. D. EVANS, Discoverer of the famous EVANS' CANCER CURE desires all who suffer with Cancer to write him. Two days treatment will cure external or internal Cancer. Write R. D. EVANS, BRANDON, Manitoba, Canada.

The peculiar properties of Chamberlain's Cough Remedy have been thoroughly tested during epidemics of influenza, and when it was taken in time we have not heard of a single case of pneumonia. Sold by all dealers.

rank among transcontinental railway systems." The party consisted of the following: Prof. Thomas Shaw, of the "Orange Judd Farmer" "Dakota Farmer," St. Paul, Minn. Herbert Quick, editor of "Farm and Fireside," Springfield, Ohio. John Arthur Dixon, Managing Editor of "Home Life," Chicago, Ill. Philip Eastman, Editor of Capper publications, including "Nebraska Farm Journal," Omaha, Neb.; "Missouri Valley Farmer," Topeka, Kan. E.E. Faville, Editor "Successful Farming," Des Moines, Iowa. E. S. Bayard, Editor "National Stockman and Farmer," Pittsburg, Pa. C. P. Reynolds, Editor of "Prairie Farmer," Chicago, Ill. The party was also accompanied by Mr. Herbert Vanderhoof, Editor of "Canada West Monthly," Winnipeg, Man., and Mr. R. C. W. Lett, Travelling Passenger and Colonization Agent, Grand Trunk Pacific Railway, Winnipeg.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

SHORTHORN BULLS FOR SALE.—WALTER E. EATON, Upper Canard, Kings Co., N. S.

SINGLE COMB BROWN LEGHORN COCKERELS—$1.00 each, ROCKWOOD POULTRY YARDS, St. John.

FOR SALE, CHEAP.—One two horse treadpower, slightly used; as good as new. Write J. D. FRIER, Sussex, N. B.

WANTED.—A capable servant for general work; good wages. Apply MRS. H. GILBERT, Rothesay, N. B.

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ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

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GUERNSEYS FOR SALE.—Cow, four years old, to freshen in January. Heifers from two weeks to two years.—D. G. MACKAY & SON, Scotsburn, Pictou, N. S.

SHROPSHIRES FOR SALE—Shearling rams, Rams and ewe lambs of the right type. Prize winners at Pictou among the lot. D M. CAMERON, Elgin, Pictou Co., N. S.

FRAMERS.—We are buyers of dressed pork, poultry, fresh eggs and want prime quality goods. Small or large shipments. Prompt returns.—JOHN HOPKINS, St John, N. B. Established 1867.

WANTED.—Persons to grow mushrooms for us during Fall and Winter months. Waste space in cellar, outhouse or barn can be made to yield $15 to $25 per week all Winter. Send for illustrated booklet and full particulars.—MONTREAL SUPPLY CO., Montreal

GUERNSEY BULLS FOR SALE.—No 1, Fairie's Gem, 5 years old, dam, Fairy of Sea Grove, sire, Gem of Norwood. No. 2, Maud's Heir, 3 year old, dam, Maud of Brookside. sire, Island Heerloom of Glenview. For particulars apply to M. H. INGRAHAM, Box 322, North Sydney, C. B

SPRING PARK AYRSHIRES FOR SALE.—One two-year-old bull, imported in dam, two one-year-old bulls, and three September bull calves. All from deep milkers. Sire, Netherhall Gentleman Joe (Imp.)—SIMMONS BROS., Box 435, Charlottetown, P. E. I.

"Agents make BIG MONEY SELLING "VOL-PEEK" Granite Cement. Mends holes in Graniteware, Iron, Agate, Tinware, etc. Mends a hole in 1 minute. Every housewife buys. Greatest seller on the market. Agents make over 100 p. c. profits.—V. NAGLE, WESTMOUNT, QUE.

FOR SALE—Fine breeding pen, S. C. B. Leghorns, ten birds, only ten dollars. Pure bred W. Wyandotte eggs, per setting 75 cents. W. Pekin and Cayuga duck eggs, $2.00 per eleven. Newly hatched chicks 15 cents each. 50 egg Incubator, good as new, only $4.00. J. W. Hughes, Firgrove Bellisle Creek Kinds Co N. B.

BAVIS' bred to lay White Plymouth Rocks won at the Fredericton Exhibition first cock, first cockerel, first pullet, first young pen, first adult pen in utility class, special for best White Rock male. If you want the kind that win as well as lay, write me. A few magnificent Single Comb White Leghorn Cockerels, $1 00 each. If stock is not satisfactory I refund your money and pay all expressage.—B. BAVIS, Cross Creek, N. B

WANTED,—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W A. JENKINS' MFG., CO., London, Ont.

HORSEMEN ATTENTION!

DR. J. WOODBURY'S HORSE LINIMENT

CURES DISTEMPER, COLDS, CONTRACTED HOOF, COLIC, SPRAINS, SPAVINS.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

MARKETS.

Summerside Prices.

Cornmeal per bag 100 lbs, $2 to $2.50; wool per lb., 20c; eggs per doz, 22c to 23c; hay, loose, $8.50 straw, $4.50; butter per lb., 20c to 25c; beef (carcas per lb., 6c to 8c, potatoes, 20c; oats, 38c to 39c; pork, 8c to 8¾; hides 10c.

Charlottetown Prices.

GRAIN—Wheat, $1.00; oats, 40c to 42c; peas, $1.25; barley, 85c; buckwheat, 75c.

FEEDSTUFFS—Bran, $1.30; short $1.40: corn meal, $2.00.

LIVE STOCK.—Stockers, $30.00; milch cows, $35 to $45.

DRESSED MEATS—Beef (carcass), 5c to 7c; beef, (retail), 8c to 14c; mutton, 8c to 12c; veal, 5c to 8c; lamb, 10c to 12c; pork, 9c.

HORSES.—Drafters, $125 to $150; roadsters, $125 to $150.00

DAIRY PRODUCTS.—Creamery butter, 21c; dairy butter, 19c to 20c; cheese, 13½c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 22c to 24c; fowl, 10c lb.; chickens, 10c to 12c lb.; ducks, 10c to 12c lb.; geese, 10c to 12c lb.; turkeys, 15c

FRUIT.—Apples, $2.00 to $2.50 bbl; pears, 75c basket; cranberries, 8c qt.; honey, 15c lb.

VEGETABLES.—Carrots, 50c bush.; potatoes, 20c to 22c wholesale; turnips, 13c wholesale; beets, 50c bush.

MISCELLANEOUS.—Hay, $45 to $50; straw 30c; wool, 18c; beef hides, 11c per lb; calf skins, 9c per lb; sheep skins 75c; lamb skins, 75c.

St. John Prices.

GRAIN,—Oats, 49c.

LIVE STOCK—Milch cows, $28.00 to $40 00; sheep, 5c to 7c per lb; lambs, 8c to 9c; hogs, 9c to 10c.

DRESSED MEAT.—Beef, (carcass), 4c to 7½; (retail), 8c to 18c; mutton, 5c to 7c; veal, 5c to 9c; lamb, 8c to 9c; pork, 9c to 10c.

DAIRY PRODUCTS—Creamery butter, 25c to 28c; dairy butter, 22c to 23; cheese, 13c to 14c.

POULTRY AND POULTRY PRODUCTS.—Eggs, case, 23c, fresh, 32; fowl, 40c to 80c; chickens, 40c to $1.00; ducks, 70c to $1.40; geese, 70c to $1.25; turkeys, 18c to 20c lb.

FRUIT,—Apples, $1 50 to $3 50

VEGETABLES.—Carrots, $1.00 to $1.10; potatoes, $1.00 per bbl. turnips, 50c to 75c; beets, $1.25.

MISCELLANEOUS.—Beef hides, 11½c to 12c; calf skins, 18c; sheep skins, 40c to 60c; lamb skins, 40c to 75c.

Market well supplied and prices dropping owing to the continual rainy weather and the rush from the river boats before navigation closes.

POTATOES.

It never pays to rush the fall market in potatoes, especially when Cold Storage is at hand for overcoming the ordinary shrinkage in store. We can quote on straight storage or on bulk receipts, barreled, stored, stowed and delivered to steamer or car, as ordered. Write for our proposition.

The New Brunswick Cold Storage (Limited), 672-690 Main St. ST. JOHN, N. B.

Jersey Bull For Sale.

I have a pure bred Jersey bull 2 years old for sale, which was first at Sussex, Fredericton and Halifax this year. Write for price, etc.

ROBERT ROBINSON,
Sussex, N. B.

Gold River Farm Poultry Yards.

We are offering choice birds for immediate shipment as follows:

Houdans—One Cock and two Cockerels of good type and show room quality

Silver Grey Dorkings—We can furnish yearling Hens Pullets and Cockerels singly or in pairs and trios, not akin. Our Dorkings are exceptionally good layers.

R. C. Rhode Island Reds—Yearling Hens, Cockerels and Pullets, singly, in pairs or in trios, not akin.

Write for our prices.

W. J. M. MacLEOD,
"Gold River Farm."
LOCH LOMOND, WEST, N. S.

CEPHAS NUNN,
Winsloe Road, P. E. I.

Breeder and Importer of Shropshire, Southdown and Hampshire Sheep. Can sell some of the above breeds, either sex. Inspection invited.

Meadow Brook Farm
SHROPSHIRES!

We have a few Shearling Ewes and Ewe Lambs and several pairs of Aged Ewes (ages from 3 to 5) for sale, in addtion to the balance of our Ram Lambs.

ANDREW McPHERSON,
Rocklin, N. S.

FOR SALE!

Ayrshire Stock Bull of St. Anne breeding for sale, also one 12 and another 16 months, from well bred cows.

Taylor Brothers, Antigonish,
"Willowdale Farm," Nova Scotia.

SPECIAL SALE!

To prevent overcrowding we quote the following prices on all our high-class Poultry. White Rocks and S. C. R. I. Reds, Hens or Pullets, $5.00 for six; six Reds and good Cockerel, $6.00; Single Cockerels, $2.00 to $5 00; some excellent Red Cockerels of Tompkins' Strain, Red to the skin. Tompkins' $25.00 quality for $5,00; no better stock to be had in Eastern Canada.

The Burley Poultry Company,
46 Princess Street, - ST. JOHN, N. B.

Breeders Director

Our charge for inserting names in this Directory is $1 per year for each line under each head. Money must be paid strictly in advance. Names taken out promptly when time is up. Standing taken.

Clydesdale Horses.

E. H. Johnson, Greenwich, K. Co., N. S.
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Jersey Cattle.

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John N. Chute, Berwich, N. S.
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J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal
J. Frank Roach, Sussex N. B.
Syd. J. Goodliffe, Sussex, N. B.
Fred. S Black, Amherst, N. S.

Shorthorn Cattle.

C. R. H. Starr & Son, Port Williams, N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.
E. P. & E. J. Armstrong, Church St., Kings Co N. S.

Herefords

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Fred. S. Black, Amherst, N. S.

Cotswolds.

H. B. Parlee, Sussex, N. B.
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SWINE—Berkshire.

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POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.

S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns.

Edgar Ayer, Sackville, N B, Breeder of Single Comb Buff and White and Rose Comb Black Orpingtons.

W. J. M. McLeod, Loch Lomond, West N. S., Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

Manning K Ellis, S. C. Buff Orpingtons, Barred Plymouth Rock.

Barred Plymouth Rocks, S. C. Brown Leghorns, R. I Reds, J. C. H. Benson, Sussex, N. B.

Pure Bred Ayrshire Stock!

We still have a few **young bulls,** which we will sell at entirely low prices, to make room for winter.

Catalogue now ready. You can have one for the asking.

HAMPTON STOCK FARM CO.,
HAMPTON, - NEW BRUNSWICK.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., November 23, 1909. Number 4.

Manufacturing and Other Interests are Bonused.

Why Not Bonus the Dairy Cow?

By Hampton Stock Farm Company.

WE have many times wondered if the farming community of New Brunswick has ever noticed the great success that has attended, and seems at the present time still more likely to attend, the many applications made to the Government of the day, both Provincial and Dominion :

For subsidies to owners of steamship lines.
For guarantee to railway promoters.
For guarantee to cold storage promoters.
For bonusing of steel production.
For bonusing of iron production.
For guarantee to builders of dry docks.
For guarantee to steel ship building.

And the lates, twe notice the Dominion Government is asked to guarantee a sum of $2,500,000 to a grand exposition to be held at Winnipeg in 1912.

Then, again, all our towns and cities seem to be only too willing and anxious to bonus in one way and another, or relieve from taxation, etc., any industrial enterprise which may make known the fact that they might locate in their midst.

All that seems to be necessary to obtain these concessions is for some good talkative promoter, who makes his living in that way, to bring the matter up—or a representation of some influential body of business men to appear before the Government and inform that body "that they are sure such and such an expenditure will be successful" and after due consideration, or lobbying around the House of Parliament, the subsidy, bonus, guarantee of the bonds, etc., is put through, and you and I and all of us have to "pay up and look pleasant."

We do not, for a moment, wish to find any great fault with all this, as we realize much of it is necessary for the development of the country at large and we are also sure to feel the benefit of the expansion.

The thought, however, comes to us, why should not the agricultural community of the country promote a claim for assistance of a similar nature ?

Why should not the business men assist us in that claim ?

The business of every wholesale and retail merchant, professional man, tradesman, transportation, manufacturer and all depends almost entirely on the development of the natural resources of their country and this, agriculture, is, perhaps, the most important, at least one of the very greatest of importance, in the Maritime Provinces.

We are almost too far away from the centre of the market to successfully compete in the larger markets of Canada with our manufacturing, but we have our natural resources in agriculture, lumber, mines and fishing.

Being interested in the first named, agriculture, we feel compelled to draw your readers' attention to a few facts, which we crave space in your columns to produce, at the same time stand ready to be corrected if we err.

We understand our Provincial Government grants $25,000 per year to agriculture at the present time and has been doing so for some time.

Are we progressing under the expenditure ?

Is it and has it been well spent ?

In comparison with other lines of trade and commerce can we not rightly and justly demand a larger sum or more expansion ?

Being particularly interested in the dairying and live stock branch of agrculture, and it probably is the largest branch, we would like to discuss that part first.

As your readers will all know, the Government of the day appointed a commission to look into the industry throughout the whole province and make a report. Their report has been made and is printed, and we presume many of your readers have seen it.

This commission, we understand, has cost the province about $6,000 and in our humble opinion it has been money well spent, so far, at least, as it has revealed the true state of affairs and its report and figures will, we think, answer any business man's or platform speaker's oft repeated query as to

Why we have so many abandoned farms ?

Why so many of our young men leave the farm ?

If you will turn to the Commissioners' Report, page 183, you will see there an estimate made up for the year 1909 of

The cost of the feed, growth and production of live stock for that year	$5,712,606
To which is added interest on the estimated value	524,416
And you have a total of	$6,237,022
Read further and you will find that the value of the product from those resources estimated at	$4,354,341
Leaving a loss on the transaction of	1,882,681

Now, while we realize these figures must be in error, yet we submit it would be a mighty hard proposition to twist them around enough to show any profit which is so absolutely essential to any business and especially would this be so when those of you interested in dairying will notice in the report the average cost to feed the dairy cows is made up at $17.00 per head.

Turn also to pages 178 and 179 and you will observe they further report finding "an absolute decline in cattle and live stock generally."

In the face of all this, after all these years, is it not time some change was made in our agric ultural policy, or, at all events, in the expenditure of the money voted, if after all these years "we show a decline ?"

Let us go further and look at the agricultural report of New Brunswick on page 65, relating to dairying, and you will see our production of butter and cheese in in 1903 was $387,639.42

While in 1908 it was 298.970.61

A decline of $ 88,668.81

While the average market price of butter in 1909 was 25.20, as compared to 1903 at 20.38, that of cheese in 1908 was 12 cents, as compared to 1903 at 10.10.

Turn also to page 64 and you will see the total number of creameries in operation in 1908 was only 23 as compared to 46 in 1906.

Why should this be ?

If you turn again to 1908 report of the annual Winter Fair at Amherst you will see on page 140 that Prof. Cumming, an authority on the subject, states that the average production of the dairy cow in the Maritime Provinces is 3,000 lbs. of milk per year. The greater quantity of this product has to be sold to the butter factories. Let us assume that the 3,000 pounds were of a good big average of richness and say it contained 4% of butter fat, this then would produce, in round figures, 120 pounds butter, which, at the extra high average price of last season, would return 25.20 cents per pound or a total of $30.24 from this machine, to which might be added, say $5.00 in by-product and say $5.00 from manure, or a grand total of say $40.00. Bear this sum in mind, $40.00 for total income. Now turn to page 143 in same report and you will find Mr. R. S. Stevenson, a practical feeder and breeder of Ancaster, Ont., and one of long and careful experience, and you will observe he says it costs them in Ontario from $35.00 to $40.00 to feed a cow for 12 months, (and Ontario is more of a grain producing country than this is) and in this we cannot be far wrong, for if you take a few items, which you will all realize must be used, such as, say

½ ton mill feed per cow per year at $27.00=	$13.50
2 tons hay per cow per year at $5.00=	10.00
100 bushels of roots, or its equivalent, per cow per year at $0.10=	10.00
And you have a total of	$33.50

To say nothing of any concentrated feed at all. According to these authorities, then, the average cow machine was producing, last year, value to the extent of $40.00. At a cost for feed alone of say $35.00, to which must be added the full keep of the herd bull, some of the raising of the young stock, at least three-quarters of the cost of the horses to haul out the manure to put in the crops to raise this raw material for these machines,

Three-quarters of the labor to raise the material.

The interest on the capital of almost the entire plant to produce this finished product.

The wear and tear of this machinery, including the cow herself, and we fear your $40.00 for production will sink into oblivion.

Certainly, it will not interest much capital.

The foregoing, we think, answers the earlier question submitted, as to our progression under the present expenditure.

Regarding the second question, as to its being well spent ?

One ot the largest items we notice is Imigration office at St. John, something over $6,000, and we further read of another recent appointment of an official to represent us in England and lecture on New Brunswick's agriculture—we presume this will add at least another $5,000 to this department. It is very nice for a lecturer to paint a glowing picture from the platform over night, but is it a business proposition for us to be spending $6,000 and perhaps doubting that now with these facts before us?

Will this $10,000 to $12,000 not immediately be confronted with our $6,000 Commissioner's report, showing the true condition ?

We do not say this in any pessimistic spirit at all, as we stand ever ready to do anything possible towards assisting this business, believing, as we do, that this section of our fair Dominion is quite capable of taking its place with the older provinces if the business can once get on its feet.

But we submit, it is like putting the cart before the horse, to spend any such money to bring new people in before using every possible dollar to bring our present production or output up to a paying basis.

If we can put our presently engaged capital on to an income earning basis, the news will not be long in being heralded abroad and the intending settler wi l be only too anxious to come to our midst, as he is going to the West to-day to share in the profitable returns from a wheat market, which shows a profit.

When a settler can come here and make money, he will not be long in inducing friends and relatives to follow. But when he investigates and finds the cold facts, which our Commissioner's report sets forth, and we believe, truly, will it not take a good many thousands of lecturers to induce many to follow their friends? Our own people, already used to our climate and conditions, are the best ones to put on their feet first. Surely some more practical way can be found in expending this money.

When most businesses, in which large numbers are employed, find they cannot meet the markets of the world successfully, the Government is usually easily brought to see the value of assistance in a practical way.

Take the steel industry in Cape Breton, for example, or the newly promoted iron mines in New Brunswick. The steel industry gets a bonus on its production. WHY NOT BONUS THE PRODUCTION OF THE DAIRY COW ?

If the average production could be made 6,000 pounds of milk per cow per year and the income thereby doubled, while the cost to produce would remain almost the same, we would not be long in getting to a flourishing condition.

We are told many times by institute speakers that we must not keep any cows producing less than 6,000 pounds—that we must send them to the butcher. All that may be true, but is it practical? We don't suppose anyone who has 6,000 pound producers in New Brunswick could be induced to part with them, therefore, where are we to get our manure to produce the crop to pay for even the small wages we get to-day ? It is also true that seemingly no matter how often the majority are told how important it is to weigh the individual production, they do not seem to do it and keep on raising stock from low producing animals. Would it not stir that dairyman up, think you, to be told that if that certain cow produced a certain quantity of milk in 12 months, she would earn an extra bonus ? Would not this convince him at once to start weighing and thus educate him to the importance of being able to produce from one what he had been feeding two to produce from before ?

We do not doubt for a moment but what a vast number of merchants and others, especially in the cities, believe that the majority of farmers in New Brunswick must be making money, as one continually hears it from the platform, at exhibitions, etc., and the first words almost any one hears, if discussion starts, is "Look at the prices the farmer is getting nowadays." A few moments on this point will, perhaps, not be out of place. There are two sides to the farm ledger, the same as every other business, and it will not take any other business long to explain to you how its cost to manufacture or produce has greatly increased, hence it is absolutely necessary for him to get more for his goods. Do you think for a moment this is not so with the farmer ?

Let us take the dairyman, for instance. Our memory serves us some 20 to 25 years back, at which time probably 18 to 20 cents per pound would be a good averege price to get for our product. The butter, which last year reached the top notch for many years and averaged 25 1-5 cents, made an advance say of 25% to 38 1-3%. Now let us look at the "cost to produce" side of the ledger. Twenty years ago we could turn help away from the farm at $12.00 to $15.00 per month, whereas it now costs from $25.00 to $30.00 per month, and only a year or two ago $32 00, an advance of 50% to 100%. Feed that now costs $27.00 to $28.00 (after a little coaxing and begging to get at all) could be bought 20 years ago for $15.00 or $16 00 per ton, an advance of 70 to 80 per cent. Assuming these figures to be correct, and any one of your readers can verify them, is it then any wonder that our Commissioners found evidence of a decline? Is it any wonder our boys, and many beside the boys, leave the farm at the first opportunity ? But why should this be so, especially in this great development that is going on in many parts of Canada? Simply because, Mr. Intelligent Farmer, we don't awaken the business community and our representatives in Parliament to get down to some practical aid to this—one of the greatest natural resources of our fair province.

Could not the Farmers' and Dairymen's Association take up the discussion of this at their meeting this winter and see if some way of assisting the industry, in a practical way, to bring it to profitable basis, cannot be evolved and then bring it before the Legislature and if it cannot be put in effect all over at first, let something be tried in one or two counties first and if such a scheme found workable and of a practical value extend it to the province ? Almost no matter what the cost, if it will make work for our boys at home and bring some profit eventually to the agriculturist, our country will then attract the settler—then induce the much needed capital to invest, which, in turn, will create an increase in our rural population, a doubling of our transportation and a life of energy in our business of all kinds, which would be new to it. Let us be up and doing.

Let us have the views of all. We know the FARMER will open its columns gladly. Our idea of a practical aid would be in the following :

Let us take one county for a trial and say each cow making 3,000 pounds of say 3 1-2 per cent. of a butter fat test, or if higher test, reduce the quantity, or if lower test, increase the quantity, but each one making

3,000	lbs.	be bonused	say	$3.00	per cow
4,000	"	"	"	4.00	"
5,000	"	"	"	5.00	"

The second year drop off the 3,000 pound producer and take on the 6,000 pounds. The third year drop off the 4,000 pounds and take on the 7,000 pounds. Run this for five years and at the end of that time let the Government select good heavy producing dairy cows, as far as would be obtainable from the provincial breeders and beyond that from wherever they were obtainable, apportion them to each county and sell at auction.

Inspectors would have to be appointed to inspect the weighing, recording and testing of each lot entering, the same as is being done in our Advanced Registry class in pure breds to-day, and even if this proposition did no more than attract our dairyman to weighing his product itself, it would be worth all it cost.

The above is only our idea and many details would have to be worked out. Let us hear from others.

Butter Making During the Winter.

In many parts of the Maritime Provinces the earning season of the dairy cows is far too short. Cows are made to freshen in the spring and are allowed to dry off by force of habit and sometimes by mismanagement in feeding almost as soon as the breath of winter sets in. The following article in a recent issue of the Charlottetown Patriot from the pen of Water M. Lea, the prominent breeder and exhibitor of Holstein cattle should give all those, who have been following this wasteful plan, some food or thought and should be the means of instigating a revolution along more modern methods of dairying:

"As our cheese factories are now about closing down for the season, I think it would be in the interest of dairying that some arrangement be made for the factories to take up the manufacture of butter.

"It is hardly profitable to feed dairy cows for twelve months to get the milk of five, and once the patrons keep the milk at home the cows are liable to be neglected.

"And as hand separators are now used by many patrons it would be well for every cheese factory that is not already equipped to at once get in a churn and butter worker and encourage the patrons to keep on sending cream, and, in this way, the earning season of many cows would be extended several months. Any dairy cow worthy of the name should milk ten months of the year. It would also tend to relieve the marked of a quantity of indifferent dairy butter now being made in the fall.

"The patrons who are still trying to make dairy butter by the old gravity system, would receive one-third more for their milk, as it is impossible to separate milk clean (from cows that have milked all summer) in the cold weather by any method except centrifugal force, as anyone who has used a separator well knows. And whatever can be said against using hand separators during the summer months, it is decidedly the best system of handling milk in the winter season.

"Our creameries that operate during the winter season receive milk once or at most twice a week in the coldest weather.

"And new milk that is held for three or four days (with whatever may happen to drop in it during milking) can not have the favor that newly separated cream has; the patron has then warm sweet new milk to feed his young stock and only a small quantity of cream to look after properly.

"Where patrons are getting three or four huudred pounds a day having to hold it around for days, and, in case of storms, often a week, is a nuisance that there is no good reason for doing.

"The hand separator is an indispensable machine on the dairy farm, and unlike any other farm machine is used every day of the year, and if cream is accepted by the creamery managers in a business-like manner will do much to advance the interest In dairying, by the fact that it cheapens the cost of manufacture ten or twelve cents per hundred pounds, and nets the patron that much more money for his milk over the whole milk system.

"Any "new" method of handling farm produce, be it milk at the creameries, hogs at the packing houses, potatoes at our starch factories, or the canning of fruit and vegetables (must show to the patrons that it pays in hard cash), better than the old system, before it can prove a success, and while it cost 5 1-2 cents a pound to manufacture butter at our creameries many farmers continued to make dairy butter, as it usually commanded within three cents of the creamery, and they could have warm, new milk for their young stock. This was the reason that for years our creamery make has practically been at a standstill. But with 2 1-2 cents a pound struck off the cost of manufacturing creamery butter, by the introduction of the hand separator, the man who continues to put up dairy butter does his work for nothing, and loses the cost of tubs extra at least.

A great deal of opposition was given the introduction of the hand saparator in this Province, as was the case in the other Provinces of Canada, where it has proven a great success, and the "abuses" of the system were held up to be just what the system really was.

The Farmers' Advocate called for the experience of prominent inspectors in creamery work in Ontario, and the reply of Instructor George Barr, whom many of our Island dairymen will have remembered hearing at a late dairy convention in Charlottetown, and whom there is none more qualified to judge, has the "following to say" when asked what influence farm separators had on the price of creamery butter:—

MUST TAKE CARE OF CREAM.

"The only influence I know off that "farm separators have had on the price "of gathered-cream butter is that, unfortunately, for a number of years, "patrons did not know how to properly "handle separator cream, and the "quality of the butter was affected. "This condition has been to quite an "extent overcome during the last four "or five years, by general dairy education and the good work of the creamery instructors in teaching patrons "how to take care of their separators "and cream properly, and the cream "gathering creameries are making "better butter today than they ever did "before the introduction of the hand "separator.

"In some cases there is no difference "in price between whole-milk creamery "butter, and cream-gathered creamery "butter, but often it is from 1-2 to 1 1-2 "cents per pound. There is more difference in price for export butter than "there is for local market.

"My opinion is that manufacturing "butter on the farm has more influence "in lowering the price of creamery "butter than sending the cream to the "creamery. Generally speaking, people "will not eat as much dairy butter as "they will creamery. Any condition "that lessens consumption reduces "prices.

"I do not believe there is any use "trying to fight the cream-gathering "system of butter-making. Cream "producers see so much difference between the creamery skim milk and "that from the hand separators, that "they are decidely in favor of the "latter. With manufacturers adopting "the best methods of gathering the "cream, and the patrons taking proper "care of it at the farm, as good butter

"can be made from it as is made in a "whole-milk creamery.

"The chief cause of a depreciation in "price of butter from the hand sepa- "rator is that many of the separators "are not properly cleaned, and the "cream is not cooled immediately after "skimming, and kept cool until de- "livered at the creamery. The produc- "er of the cream is therefore responsi- "ble for the lower price, and he is the "only one who suffers from it, so it is "up to him to remedy the trouble. "Many skim too thin a cream, 20 to 25 "per cent.; it should not be less than "30 per cent. Lack of cooling is the "greatest defect in handling the cream "at the farm."

Crapaud Creamery was the first to accept cream from hand separators in this Province, and, as a patron and shareholder of that creamery, I thought it might be of interest to others about to start the cream-gathering system to give our experience. A proper scales was at once secured for weighing the samples of cream for testing, and our butter-maker was careful to instruct all new beginners in the importance of send- ing a heavy cream and the proper caring for the separator. The result was that whereas the seventy odd cream-gather- ing creameries in Western Ontario had an average test for the season of 22 per cent., Crapaud cream averaged 30 per cent fat. The inspector classed it as the best butter Crapaud ever made in winter. The results of the first sum- mer's work have been very satisfactory, both to the management and to the patrons sending cream, and the increase in make (due directly to the introduction of the cream-gathering system) most gratifying, totalling some 90,000 pounds of butter, an increase of 40,000 over two years ago.

"I think it would be a great boon to dairying if our cheese factories would now arrange to churn cream. Every- thing possible should be done to induce farmers to have their butter made at the creamery, as that is the only way we can have an uniform article and hold our splendid market. And the factories that first take this up are going to get the business. This is what has taken place all over the United States and Canada. The factory that refused cream lost its patrons; the big ones simply absorbed them, for no man who has ever sold cream to the creamery, and had sweet warm milk fresh from the cow to raise his calves with, will ever go back to the old system again. The hand separator is here to stay, and the wise thing for the creamery man to do is to cheerfully accept cream (it's all they can use in the making of butter anyway) and instruct patrons in the proper handling and care of cream on the farm, and, as Instructor George H. Barr says of the Ontario cream-gather- ing creameries, they will make better butter than before the introduction of the hand separator."

Fighting the Canker Worm.

EDITOR MARITIME FARMER:

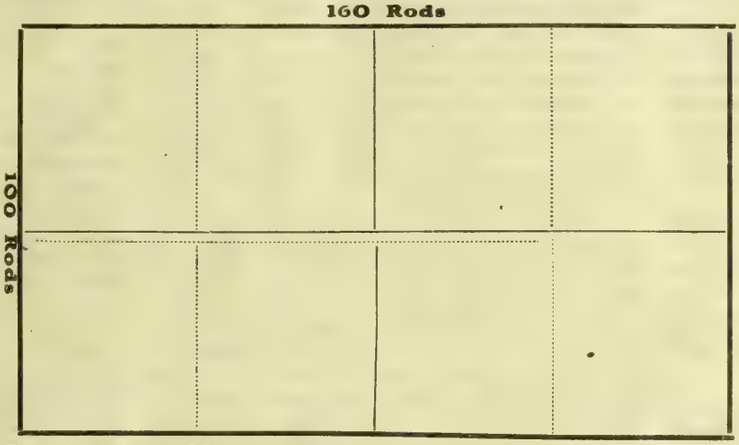
It is quite generally considered by growers of apples that it is impracti- able to exterminate the canker worm by spraying with arsenical poisons. Some of our most careful men have tried thoroughly and failed in the at- tempt. Experience, however, has shown that no pest is more easily con- trolled than this, when taken in time. Banding the trees in the fall with a sticky substance, if properly done will destroy every moth that lays canker worm eggs.

Castor oil and resin, equal parts by weight is the standard remedy. This combination may be melted (not boiled) in any metal dish and applied with an ordinary paint brush. A band four inches wide around the trunk of the tree is a positive preventitive. No crawling moth can get over it, and all female canker moths crawl. this re- medy is being largely used in the in- fected districts and many thousands of the moth are being thus destroyed. In- cidintly a Yankee concern introduced a "tangle foot" this season guaranteeing it would do all kinds of wonderful things, and always remain sticky. Hundreds of pails were bought by fruit men who are always looking for something easy, the result was that in every instance when used the tangle foot hardened in a few hours so canker moths could skate on the tree trunks. The Yankee fraud cost $2.50 per pail, while home mixed real sticky stuff will cost about $1.25 These lessons are salutary but expen- sive.—S.C.P.

Planning the Fields.

In dividing a farm up into fields the size of fields will depend on the rotation of crops that is to be followed. Mixed farming will require a greater number of divisions and in some cases it may be necessary to provide fields of less than ten acre areas. The general princi- ple may be laid down that the fields should be large in order to lessen the expense of maintaining fences. It is cheaper to plough and cultivate in large fields where there is little turning. If a hundred acre farm of the shape indi- cated by the accompanying diagram be divided into eight fields, it will require 1,320 turns with a twelve-inch furrow to plough one of the 12 1-2 acre fields disregarding the waste along the fences. If each turn can be made in thirty seconds the time consumed will be 660 minutes, or eleven hours.

If the farm is divided into four parts, by halving in each direction, as sug- gested, one of the twenty-five acre fields can be ploughed with 1,650 turns,



Fencing for a 100-acre farm. The dotted lines show where fencing may be removed or portable fence used

requiring 13 3-4 hours of time. This effects a saving of 8 1-4 hours over the time required in ploughing the two fields separately. If two of the fields lying end to end are ploughed together no more turns are required than in ploughing one, and eleven hours would be saved in turning. A square field of 12 1-2 acres requires 1,500 turns with a twelve inch furrow, which will con- sume 12 1-2 hours in turning.

If the furrow is only nine inches wide instead of twelve inches, it will require only about one-third more turns, with consequent increase in length of furrow, in time consumed in making turns, and in time lost from inconvenient shape of fields.

A strong team, able to do the full amount of work required trained to walk at a brisk pace, with implements of the largest size consistent with effi- ciency, and also well arranged fields, are important factors in the economy of time.

The shape of the farm itself may be an important matter. In some locali- ties long, narrow farms, with a short frontage on the highway and extending a long distance back on the hills, are the rule. Such a farm is much more expensive to work than one which is more compact, with buildings more centrally located. The additional cost of going to and from work at the fur- ther end of such a place, and especial- ly of drawing in crops and drawing out manure becomse a decided handicap to the business.

As striking illustrations of the loss of time which may occur from incon- venience on the arrangement of the farm, or as a result of conditions which exists, John Hamilton, in one of the reports of the Pennsylvania Depart- ment of Agriculture, has called atten- tion to the fact that the man who has driven his stock one-fourth of a mile to water twice a day for forty years, has travelled 14,600 miles in doing so.

Preserving Ensilage.

Many different plans have been tried to prevent ensilage from spoiling after it is put in the silo. The first plan was to cover with boards or plank and weight heavily with stone. The second plan was to make the covering air tight by putting on fine chaff, then a layer of boards covered with tarred paper and then another layer of boards with hay to hold the boards in place. For a dozen years or more, many farmers have used water with no covering. In a re- cent issue of this paper the editor ad- vocates putting 20 or 30 bbls. of water on top of the ensilage. Last year a man living a few miles from me cover- ed the ensilage with a foot of sawdust but even then he found 8 inches of spoiled ensilage.

None of these methods has been per- fectly satisfactory to me on account of the amount of labor envolved. If a man has a force pump, hose and windmill, there may be but little work in putting 20 bbls. of water on the ensilage, but if the silo should be several hundred feet away and the farmer must buy a new pump and hose there is considerable ex- pense. Again, if there is no wind for a few days, some other power must be used.

When helping one of my neighbor fill a silo, I told him I wanted to try a new trick. At my request, he made eight gals. of strong brine and we put it in milk cans and drew up 4 gals. at a time. We used a common sprinkler and put it on the top and reported 1 inch of spoiled ensilage. The cost was 5c. for salt and the time of two men for 20 minutes. The silo was round and 14 feet in diam- eter. If ensilage is rather dry use more brine.

A farmer built a stone silo last year and was surprised to find that the en- silage spoiled aronud the sides. I offer- ed to furnish him a remedy for $1. He said that was cheap enough. If the en- silage spoils around the sides or around the doors, use strong brine when filling. The question noturally arises "Is there any danger in using salt in the silo?' I reply there is danger in carrying a lantern to the barn, but any man who can be trusted to carry a lantern, can be trusted to use salt, for in taking it out a small quantity of salt ensilage be- comes mixed with a large quantity of fresh.—N. B. White in Hoard's Dairy- man.

Improvement Gained by Plant Breeding.

What can be doue by a careful choice of seed and plant selection is shown clearly in the last report of the Cana- dian Experimental Union.

The Agricultural College of Ontario has introduced into the variety tests on its experimental farm about 2,000 varie- ties of field crops. This testing has been followed by the persistent improve- ment by seed selection of those varie- ties proving best, and by the yearly dis- tribution through the Experimental Union of the latest and best improved stocks. The following table shows how these improved stocks have compared under the conditions of these experi- ment station tests with some of the leading standard varieties used in the Province. Here no factors entered to give differences in yields save the here- ditary powers of the respective varie- ties. The experimenter's skill intro- duced, discerned, and improved those which through a long series of years proved to yield the largest value per acre.

Comparative Results in plots at On- tario Agricultural College of some new and old varieties.

Varieties.	Years tested.	Per Acre bush.	Increase per cent.
Siberian oats	16	88.2	23
Black Tartrain	16	71.6	—
Mandscheuri barley	16	69.8	19
Mensury barley	16	58.7	—
Dawson Golden Chaff W. W.	10	57.3	11
Early and Red Clawson	10	51.6	—
Empire State potatoes	16	231.0	13
White Elephant	16	203.7	—

The practical result of these improve- ments is demonstrated by the average increase in bushels per acre in Ontario, calculated for periods of ten years, thus :—

The yields per acre of Ontario's en- tire area of winter wheat, barley, and oats for the first ten years of this work, before these varieties had been much improved, and for the second ten year period, just closed :—

Average yields in bushels per acre for Ontario.

	10 Years 1887-1896.	10 Years 1897-1906.	per cent. of Increase.
Winter wheat	19.2	21.7	13
Barley	24.8	30.6	24
Oats	32.2	33.3	19

It will be easily understood what this increase means in the agricultural pros- perity of the country, and nothing could demonstrate more clearly the wisdom of liberal expenditure on scientific re- search and experimental stations.

The Value of Feeds.

EDITOR MARITIME FARMER :

In your issue of Nov. 9, page 51, appears a statement headed "Value of Feeds" which appears to me to be very misleading, yet the subject is one of the most important that can come before the feeders of stock in this province where so much feed is bought. We buy bran, linseed and cotton seeds, chiefly for the protein they contain. Our home grown feeds containing as they do a large percentage of carbohy- drates require the addition of protein from these sources to balance the ration. The prices of these feeds here at present are about as follows: In wheat bran at $25.00 per ton, we have about 244 lbs. protein costing about 10 1-4c. In O. P. linseed meal, contain- ing 34% protein we buy at $30.00 per ton 680 lbs. protein at about 5 1-2 c. per lb. In cotton seed meal contain- ing 41% protein at $36.00 per ton we buy 820 lbs. protein at about 4 1-2 c. per lb.

Cotton seed meal, our cheapest source of protein is very variable in quality and large quantities of poor adulterated meal have been imported and sold in this province, and the purchaser never looks at the analysis which should be attach- ed to every bag, and very possibly he does not know what the analysis should show. No greater imposition is pra- ctised on the unsuspecting farmer than the sale of some brands of cotton seed meal at possibly $1.75 per bag.

Yours truly

Kings Co., N. S. J. RUFUS STARR,

EDITORS NOTE:—We are glad Mr. Starr called our attention to this matter. By typographical errors we were made to say 44 cents and 36 cents instead of 4.4 cents and 3.6 cents.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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NOVEMBER 23, 1909.

Dates of Issue.

December.....7-21
January.....10-24

DIFFERENCE BETWEEN SUCCESS AND FAILURE.

In no line of business or industry are there more failures to record than in those associated with land, soil, crop growing, live stock production, etc. The public mind is now filled with the idea that land ownership means success, money making in its operation. It is true that there have been fortunes made in recent years, in the advancement of land values, whether improved or unimproved, and whether operated intelligently, skillfully, economically or without system and method. This, however, is a condition that will pass away after a while, land values will come to a standstill, and the land owner will have an investment that means something more definite than at present. The owner who cannot make the land pay expenses, keep up repairs, pay a reasonable interest on the investment or its appraised value, will not be called a success, nor the land under his management a successful business venture.

Thousands of persons are each year becoming land owners, some on a large scale and some on a small scale. A large per cent of these new land owners are not practical or skilled operators in land management, in the economical use of land for its best results in crop prodoction. Many of them became land owners through speculative influences, others through the belief that they could follow in the footsteps of the successful farmer, fruit grower or gardener, and produce the large yields and fine crops that seem to be the unaided work of the hand of Providence.

It is not an uncommon thing to hear of some suburban fruit grower or gardener on a five or ten acre tract of land producing $500 worth of crop per acre. To the unskilled, the person of little or no real knowledge of the industry, this seems easy, only the matter of placing himself in the other man's position. "What man has done man can do," is the ambition that too frequently prompts young manhood to efforts that are only successfully attained after years of study and diligent labor.

The examples of failure are more readily observed where large things have been attempted on high priced lands and small holdings. The little fruit farm and the poultry farm, when thrown on their own resources, and poorly managed, display a lamentably meager revenue for the operating expenses and the maintenance of a family. It has been questioned by good authority, and is now under careful test, whether or not there can be anything made in the keeping of common poultry for egg production on small yarded and confined quarters where all the feed must be purchased to carry on the business. This test implies a full and complete cost of all buildings, fixtures, labor and expense of handling the business.

It will be observed that there is quite a difference between this poultry work and the farm poultry industry, where a few dozen or a few hundred fowls have the unrestrained run of the barn yard, stock lots and near-by fields to gather their living without cost to the business. In the latter case al receipts from sales are practically profit and figures up in the interest of poultry raising, without explanation. The same principle of estimate, in cost, applies in the dairy business. On the farm where there are tons of waste products consumed by the cows that have really no commercial value; straw fodder and grasses, in waste places. The greatest source of failure in this feature of farm operation lies in the keeping of poor quality cows. A cow is a cow, with many land owners, whether she furnishes six quarts of milk per day or eighteen, and whether it tests 3 per cent. butter fat or 6. The same lack of system is found with the fruit grower—he trusts to Providence to ward off insect pests and produce for him a crop without the usual vigilance and persistency that has brought success to the wideawake, and industrious orchardist.

There are today on adjoining farms, land owners who are as widely apart in their management and methods of handling their lands as profit is from loss. A land owner is not necessarily a money maker, neither are all lands of equal producing value. There is a difference in lands as well as in land owners. There will never be a time, baring crop failures and accidents, when the systematic, energetic, up-to-date farmer will not be able to make a fair profit, from his land; and there never will be a time when there will not be failures and disappointments to record from among the careless, indifferent and lazy land owners.

BACKING UP.

It't a mighty hard thing sometimes to back up and start over when we find we are on the wrong track. We can go ahead all right, but when it comes to backing up, "there's the rub."

A few years ago in one of the Western states, a man of considerable prominence fell heir to a large estate involving 8,000 acres of good farm land. This land is now worth $100 an acre. He started in farming, and at the same time started a "hobby." His general methods for carrying on his farm operations proved a failure, but he would not back up. he refused to listen to his more practical neighbors and insisted on going ahead along the lines he had laid down. He was too proud to acknowledge that he was wrong. He just couldn't back up. Well, he lost his farm, but fortune smiled upon him again and he fell heir to another estate and started again. He got another idea into his head and he stuck until he lost his all. He is now an old man. The other day he was obliged to write back to his old friends and ask for assistance to keep him out of the poor house. A sorry picture but true. A life tragedy on a large scale but quite applicable to many in the humble walks of life.

Somehow we are apt to get a certain idea into our heads. Just where we get it we can't tell, but it is there. We stick to it faster and tighter than a "dog sticks to a root." We hang on with "might and main." It fights back at us and we strike back, but continue to stick to our idea and resolve to fight it out along a certain line, and al the while we are making a mistake. We just can't back up. It isn't our nature. Then when too late we can only think of what "might have been" and of the "barren regrets."

How often do we see a farmer who has run out on the sidetrack and all the while thinks he is on the main line, refusing to stop and back up, which is the sure way to get out without much loss.

A good share of the real work of this life consists in trying to learn how to back. True it is not always an easy task, when we have spent much time and money on a pet idea, to stop and start over again, but friends, is it not better to do so than to go on and meet failure in the end.

Few, if any of us, have learned all there is to be known about farming, although we may think we have. Every season brings up new problems. If our neighbors across the way has a better way of handling his crops than we have why not give him the credit and try his way. If it requires a little backing up let's do it. If we are not settled in our minds as to whether we are doing things exactly right or not, let's stop and think the matter over, and if necessary, back up and start again.

If we have not been conducting our farming operations along the right lines, let's get right even if it is a little humiliating.

THE COURAGE OF HER CONVICTIONS.

Mrs. A. C. B., in a recent issue of the New England Homestead says :

"If encouragement exists anywhere it is on the farm. Here the man may live a reasonable independent life and receive a fair reward for the work of his hands. My sons will never be anything else but farmers if they listen to their mother. I wish all five of them could own farms near enough to visit them. Four of them are grown and show no inclination for another calling, but I am trying hard to arouse an ambition in them to be land owners instead of renters. I want my daughters to marry farmers because they are well fitted to be farmers' wives. They can milk cows when the men are off threshing and have helped their brothers break colts, and this does not detract from their womanly appearance and their home-keeping qualities. My husband has given the boys only a common school education, but I still hope that one or two of them may yet have a chance at an agricultural college. It may be that I am a benighted being, but I would not send a farm boy to any other lest it educate him away from the farm."

Mr. Farmer, where are you going to send your boy to school this winter? Are you going to send your boy to a school that will have the tendency to draw him away from the farm or are you going to send him to the "Truro Agricultural College" which opened on November 2nd and which will lead him to see the possibilities of farm life and attract him to the farm.

Send him to the Truro College where his inclinations will be bent towards the farm and where he will be taught to remain and develop the resources of his own native place instead of going to assist by his brains and energy in the development of some other place. We want more of our brainy young men on Maritime Province farms.

ENCOURAGE THE DAIRYMAN.

There is gunpowder in every man if you can only get the spark to it. There is talent power in every dairyman—often more than he himself dreams he possesses. All that is necessary is to light the flame of the enthusiasm by showing him his own opportunities and possibilities and the hidden gunpowder within him will make him explode into sudden and irresistible action. On other pages of this issue will be found an article on the Dairying Conditions in New Brunswick and a plea for more encouragement to the dairy industry. A bounsing system is suggested. Let us have a full discussion by our readers re this matter. It may be the means of igniting the irrisistible actions and achievements that are so essential to success in the dairy business.

The Worn-Out Farm.

A long-abandoned farm is not so difficult to restore to fertility as one that has been worn out by successive cropping by a man who does not understand his business, or who is hiring the place from another and does not care how much the soil is robbed. Many farms that have been left idle for several years have to a certain extent restored some fertility to the soil by the natural process. That is, leaves, vines, stocks and even weeds will add a certain amount of humus and nitrogen matter to the soil each year. If such land is plowed twice a year, so that the soil can digest and assimilate the plant life that has accumulated there, it will be found to be in a fair way to recuperate.

It is not such a difficult matter to restore a run-down or a worn-out farm as some people imagine. It simply requires a little practical and scientific knowledge put into operation by a man who is not easily discouraged. Many a poor man has made his mark in farming on just such worn-out farms. It is possible to-day for a farmer to take a worn-out farm and build it up to a paying basis, supporting himself meanwhile. Farms of this character can be purchased reasonably cheap in many parts of the country, or they can be rented for a long term of years, with renewal clause attached.

The first thing to do in restoring such a farm is to get a crop of some green stuff. It is easy to start a crop of rye by fall plowing, scratching the ground just enough to cover the seeds a little. Then by the following spring when the rye is up, it should be plowed under. This makes a good starter and then by adding crops of grass and clover to the rye the soil will soon get the nourishment that it has so long lacked.

In most worn-out farms the soil is stiff and hard and during dry weather the surface bakes so hard that it is difficult to force a plow through it. There are two remedies for this. One is to work more plant manure into the soil, which makes it porous and the other is to underdrain it. If the soil does not respond to the former treatment of the course in time underdraining must be resorted to anyway. Too little attention is given to this on most old farms, especially where the soil is a tough clay.

Plowing is one of the best methods of restoring the lost fertility of the soil. It works well whether the soil has too little plant food in it, or when it is over crowded with humus. It enables the soil to digest the food, releases much that is imprisoned in it and stores up nitrogen from the air. Not only fall and spring plowing, but summer plowing too, is required on some farms that have been allowed to run down. Such work will often take the place of commercial fertilizers and barnyard manure, although all of the latter that one possibly can secure should be mixed up with the soil at every plowing.

Loss on Farm Implements by Exposure.

EDITOR MARITIME FARMER :

This is a machine age and we of the Maritime Provinces are a machine using people, but we have not, as a people, learned to care for machinery so as to lengthen its life. Every man who has driven through the country and seen machines and implements standing in the fields, on the roadsides or in open lots, knows that the loss from this lack of care is tremendous. While there are no figures on the subject to show the extent of this loss, yet it is plain to the observer that the deterioration from exposure is greater than the deterioration from wear, and that if machinery had perfect protection from the weather it would last twice as long as it does.

It matters not whether the machine or implement is mostly wood or iron and steel, the weather is about as bad on one as on another. It peels the paint off, decays the wood, rusts the iron and steel and rusts the nuts on the bolts so that it is often impossible to twist the nut off without twisting the bolt in two. With such treatment as this the best machinery goes to pieces in two or three seasons.

The careful farmer avoids this loss. He has dry sheds under which to store his machinery and protect it, not only against the weather, but against chicken roosting all over it, and the careful farmer always is able to run his machinery for years; perhaps 10, 15 or even 20 years with slight repairs.

What would the farmer think of the manufacturer if he allowed his roofs to become faulty and his machinery to be damaged by rain ? What would he think of the MARITIME FARMER if they allowed it to rain on their presses ? He would call it careless and slip-shod, yet he is careless and slip-shod in allowing rain and wind, frost and sun, to eat away the newness on his machines and make them old before their time.

The lumber to make dry sheds in which to house machinery will be quickly paid for in the lengthened life of the machines. It is expensive not to provide shelter not only for machinery, but for live stock. There is not a part of the Maritime Provinces but what it pays to provide adequate shelter.

The loss of machinery, from exposure, is duplicated in the loss of vehicles from the same cause. Farm wagons and even pleasure riding vehicles are frequently left out to take the weather as it comes. First, the varnish goes, then the paint and then the whole vehicle becomes ramshackle. Such carelessness helps to keep the owner poor and it is a discredit to the farmer that such carelessness exists.—TIDY FARMER, Pictou Co., N. S.

Absorbents.

When selecting an absorbent to use for bedding in the stables it is often the case that no account of the manurial value of the material used is taken. Some use sawdust as an absorbent, never considering that the sawdust of itself contains very little fertilizer material, and whaat is contained in the sawdust is so locked up that it does not become available for years. The straws of different cereals are much richer in plant food and they rot quicker, rendering the plant available. The result of using sawdust is that there is a large bulk of material to be removed to the field which contains very little food plant.

According to a bulletin issued by the Virginia Experiment Station, sawdust contains only 2 pounds of nitrogen, 4 pounds of phosphoric acid and 8 pounds of potash per ton. Giving the nitrogen a value of 12.5 cents, phosphoric acid and potash a value of 5 cents per pound, one ton of sawdust of itself is worth only 85 cents per ton for the plant food which it contains. We find that wheat straw contains 11 pounds of nitrogen, 4 pounds phosphoric acid and 12 pounds of potash per ton; calculating at the same rate as we did the sawdust we find that wheat straw is worth $2.18 as a fertilizer. Oats straw contains the same amount of phosphoric acid, is one pound richer in nitrogen and 8 pounps richer in potash per ton, and valued as the others, it is worth $2.70 per ton as a fertilizer. Buckwheat straw contains 26 pounds of nitrogen, 12 pounds of phosphoric acid and 4 pounds of potash per ton, worth $6.25. Barley straw contains the same amount of nitrogen as buckwheat straw, 6 pounds of phosphoric acid and 41 pounds of potash, and is worth $5.60 per ton for its plant food. Forest leaves are often used as bedding; they are not as good absorbents as the straws of cereal grains, but are preferable to sawdust, considering everything. Forest leaves on an average 12 pounds of nitrogen, 6 pounds of phosphoric acid and 6 pounds of potash, which are worth at a conservative estimate $2.10 per ton.

These may seem small things, but they are worthy of consideration, especially when we are contemplating using sawdust in bedding and allowing straw to lie out on some waste place and rot where there will not be any

(Continued on page 87)

DON'T BE LED INTO SIDE-SHOWS.

THE MAGNET.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT
STEADY AS A ROCK

The BEST SIGHTS in the circus are all under the main tent. They are the big show, but the road to the big show is lined by low priced side shows, of minor attractions with wily barkers outside, ceaselessly striving to draw the passing throng off the main thoroughfare.

It is just this way with Cream Separators in Canada. "THE MAGNET," CANADA'S ONLY CREAM SEPARATOR, is in the BIG TENT in a CLASS BY ITSELF, with its LARGE STEEL BOWL, SUPPORTED AT BOTH ENDS, (MAGNET Patent.) ITS ONE PIECE SKIMMER TAKING ALL the BUTTER FAT OUT OF THE MILK and AT THE SAME TIME removing the IMPURITIES FROM BOTH.

Its complete set of SQUARE GEARS, cut from SOLID BLANKS—LAST FIFTY YEARS.

MAGNET BRAKE circling the bowl (MAGNET Patent.)

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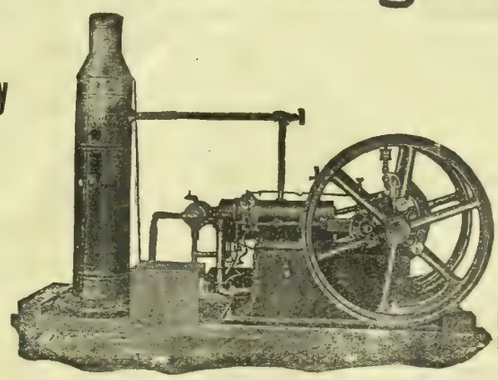

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HORTICULTURE

Fall Cultivation.

I have been advocating for many years the system of fall cultivation of orchards, believing it to be the best method. I will give a few reasons why orchards should be cultivated and fertilized in the autumn, whenever possible.

By plowing, say five or six inches deep, after the leaves have fallen, and harrowing to a fine tilth, you have an "earth dust mulch," which is one of the best protections from frost. You will have buried all the spores of the black-spot which may be deposited on the leaves, which is, undoubtedly, the main source of propagation in the spring. You will also have disturbed, and buried deeper, any cocoons of canker worms, codling moth and other insect pests that may harbor on or near the surface soil. And you will have placed the cover-crop or other vegetation, with the leaves, where it will be converted into plant food, and made ready for the early growth of the trees in the spring.

If you apply such fertilizers as barnyard manure, ground bone, muriate of potash, or others of those partially insoluable commercial manures and harrow in, you will assist nature to provide the trees with an early spring breakfast and enable them to commence the season with vigor and pass the period, of what is sometimes excessive bloom, without the exhaustion that we frequently observe, and that is followed by failure to set fruit, or by excessive dropping after it is set.

If this system is properly carried out in the fall, the disk is all that is required in the spring to get a mellow surface, until the time has arrived to sow the cover crop, the orchardist may congratulate himself when the latter is in, that his work for the season, so far as cultivation is called for, is done.

As there can be no rule without exceptions, it may be found impracticable to follow this system on side hills or where the soil washes badly in the winter. There you may have to leave the cover crop to bind the soil until spring; if so, then do your cultivating and manuring at the earliest possible date, for it is the early and vigorous growth in the spring, and the mature, well ripened wood and buds in the fall, that ensures the health of our fruit trees, through our changeable winter weather.—R. W. STARR, Wolfville, N. S., in Canadian Horticulturist.

The annual meeting of the Nova Scotia Fruit Growers' Association will be held in Kentville on Wednesday, Dec. 1st and two following days. Among the topics for discussion will be Co-operation in Packing and Marketing, Cold Storage, Summer Sorting, Control of Moisture in Orchard Soils, Orchard Fertilizers, etc. Profs. Cumming and Shaw, of Truro; Frank T. Shutt, of the Ottawa Farm; Robert Thompson, of St. Catherines, Ont., and many others will address the meeting. Kentville is the heart of the fruit district and a charming place to visit, so a record meeting is anticipated.

S. C. P.

Profit in Apples.

Three recommendations were made by Alexander McNeill, Chief of the Fruit Division of the Dominion Department of Agriculture, in the statement which he made before the Committee of Agriculture at the last session of the House of Commons. These recommendations were in effect :

(1) That orchards of early apples be planted for the purpose of supplying the expanding market of the West.

(2) That the co-operative principle already applied to apple growing be further extended.

(3) That evaporating plants be put up by co-operative associations.

Even if a million early apple trees were judiciously planted in the Lake Erie district now they would not, Mr. McNeill said, come into bearing soon enough to supply the demand for early fruit from Great Britain and the Canadian West. We have not the fruit required to supply the present demand, he said, and the prospects are that the requirements of the markets named will still more greatly exceed supply in the immediate future.

In speaking of co-operation, Mr. McNeill referred to the well knowu case of the Forest Association, of which Dan Johnson is manager. In 1907, when the average grower did not realize over $1 per bbl. for his apples, and in a year in which private apple operators experienced losses in selling their stock, the Forest Association, by its effective organization, and the quality of the fruit put up realized fully 50c. per bbl. for its members above current prices. In 1908 they secured over $2 per bbl. for the 7,000 or 8,000 bbls. handled.

In speaking of the advisability of extending the business of evaporating apples, Mr. McNeill pointed out that while Canada exported, last year, nearly a million and a half barrels of green apples as compared with a million exported by the United States, our exports of evaporated stock on the other hand, were less than 7,000,000 lbs. as compared with 35,000,000 lbs. exportrd by the neighboring country. Evaporators should, he said, be erected in connection with the operations carried on by all the co-operative associations. In support of this statement he pointed out that Chatham Association increased its returns by one-third by means of an evaporator.

and if it or the harrow are used, say once a week to conserve the moisture,

Speaking of the returns from apple growing, where the work is intelligently carried on, Mr. McNeill said, there are cases, in which land, that would not be worth more than $50 or $75 per acre for ordinary farm purposes, has, by an expenditure of $100 per acre for trees and the care of the same, been increased four hundred per cent. All, however, depends on the extent of the care given to orchards. In Norfolk County, for example, the product of five acres of comparatively uncared for orchard sold six years ago for $180. Next year the title to the land passed to A. Gilbertson. Mr. Gilbertson at once began to cultivate, prune, spray and thin the fruit. Last year this same orchard yielded a revenue of $1,500, while the expenses of the year were only $200. Another fruit grower in the same neighborhood made a profit of $10 per tree from his orchard.

The Maine Fruit Marks Act.

It is suggestive to find that our competitors in apple growing are adopting some modifications of the Dominion Fruit markets Act to regulate the grading of their apples. The state of Maine is a competitor with us in the English market. Maine Baldwins are quite an important factor in the market, coming in the same class as the Nova Scotia Baldwin. The State Legislation has passed an Act defining "the grading and marking of apples." At a meeting of the Maine State Pomological Society held at the Experimental Farm. Prof. Gardener of the State University defined the grades according to the new law as follow:

No. 1—99 per cent. at least, above 2 1-4 inches in diameter, free from blemish and well colored. No 2—90 per cent. at least, about 2 inches and free from blemish and well colored. If over 2 1-4 inches and having a single blemish from worm or scap, an apple would pass as a No. 2. Unclassified—All falling short of these requirements. Fancy—90 per cent. at least above the average size for the variety, better than the average in color and free from blemish.

It will be seen that our friends in Maine have adopted an arbitrary classification by measurement. This method was proposed in the early stage of the Fruit Markets Act, but the clause was dropped out in the final revision. The Dominion Fruit Inspectors use a standard to settle disputes as to size for No. 1 and No. 2, but the former is placed at 2 1-2 inches in diameter and the latter at 2 1-4, thus making our No. 2 equal in size to the Maine No. 1. The Standard adopted by the Canadian Act is none too high, and in the opinion of most reputable packers it is advisable to pack above the requirements of the Act.—S. C. P.

Judging Fuuit.

The subject of having an established recognised scale of points for the guidance of judges in placing awards at our various provincial and county shows is one in which all fruit growers should be very much interested. I have a young orchard that will begin to bear returns for my expenditure in the course of a year or two. I expect to follow the soundest advice I can get in apple growing and packing. I have been at various exhibitions and was rather baffled at times to note that the various judges

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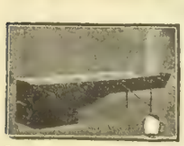

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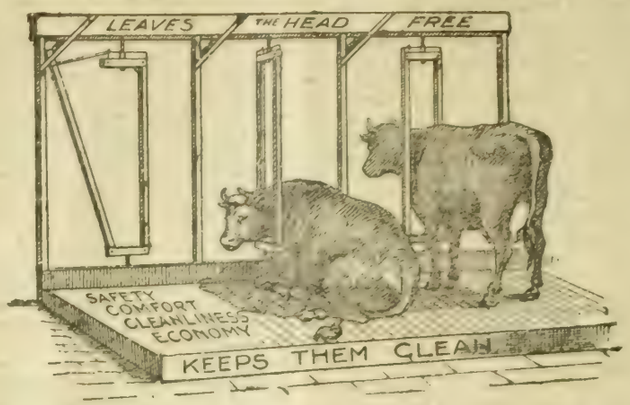

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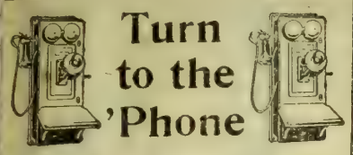

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seemed to have a personal standard rather than any one fixed standard whereby the judging would be kept in a consistent groove.

I am glad to note that the N. S. F. A. is now taking this matter in hand and I trust their efforts will be crowned with success.

Following are a few suggestions regarding Fruit Judging which I clipped frome a recent issue of the Maine Farmer and which may be of interest to your readers:

MARKET STANDARDS FOR THE SHOW ROOM.

In connection with our recent visit to the New England Fruit Show, we had the pleasure of riding on a train for some little distance with the noted orchardist, J. H. Hale, of Glastonbury, Conn. We were feeling somewhat disgruntled by what we had seen of the the judging at the show, and naturally made the most of an opportunity to get the opinion of one who is an acknowledged authority on fruit, from the business standpoint especially. In reply to sundry questions Mr. Hale said:

"To my mind the proper man to judge fruit, is the man who makes a business of buying it. When a man puts his money into apples, rest assured that sooner or later he will know apples. His knowledge may cost him something, but he gets it in good practical working shape."

"What do you think of the judging of fruit at the Fall Fairs?"

"As a rule they might just as well toss the ribbons up in the air and let them stay where they fell so far as benefiting the fruit industry goes. They asked me to judge one once, and before I had gotten far the managers came to me and said, 'Why Mr. Hale, you must give these people some premiums. They have brought their fruit, and if we don't pay them something they won't come next year.'"

"How would you get around that? It's a practical question that confronts every fair manager.

"I should say give a small gratuity to every exhibitor, and then have a few good prizes to go to the one who deserved it."

"Would that be practical when we have so many different varieties and classes?"

"Too many varieties is one of the fundamental troubles with New England orcharding. We have only a few commercial varieties, and I believe these are the ones to encourage, as well as a small select family list."

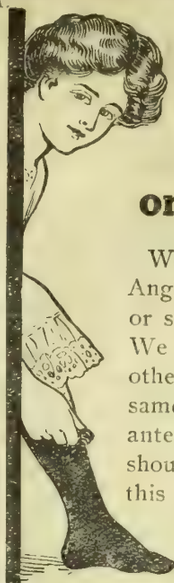
"So you would manage a fruit show with reference to market conditions?"

"Yes sir, I would make the unit for commerce in the choicest grades, the bushel box."

"Well, I would put the judges up on a low platform where everybody that wanted to could watch and see what they were doing. Then let them call for the entries of a certain class and have these brought in and put before them. Expert buyers could tell at a glance the two, or at most three boxes that were really in the competition. These they should carefully unpack, examining every specimen. Then a blue ribbon would really mean something."

"As to the judging at the recent New England Fruit Show the judges of plate exhibits apparently let size count for too much in the scale of points, while uniformity, color and style, so valuable in home and market, were apparently not so fully considered. I am confident if three judges were desired, a committee made up of one wholesaler, one retailer, and an appreciative consumer of apples had judged that plate show, most of the blue ribbons would have gone in other directions than they did, while the apple and box judging in the commercial exhibit, as done by Prof. F. C. Sears of Massachusetts and Pres. Charles L. Gold of the Connecticut Pomological Society, was the best work of the kind I have ever seen anywhere in the East and should be a great stimulus to future exhibits."

CONSTANT READER,
Cumberland Co., N. S.



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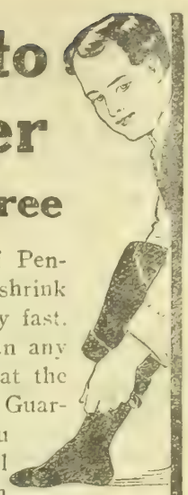

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No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns. 2-ply leg. 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

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No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

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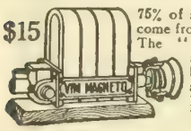

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A. R. Williams Machinery Co. Limited, Toronto

The Song of the Woodpecker.

Running along with a ceaseless song,
The Woodpecker runs the whole day long;
A little gasoline, some water and air
Is all he wants for his bill of fare.

II.

He never complains of a pain or ache,
But labors along for his master's sake;
He will saw your wood and grind your feed,
And thresh your wheat of chaff and weeds.

III.

He will pump your water and run your lathes,
You will count the money he always saves;
He wants no pay, this gasoline knight,
The Woodpecker works because he is right.

IV.

"The music will be furnished by the exhaust,
Free literature, prices and all information,
By the L. M. Trask Co.,
29 Dock St., St. John, N. B."

Southport, P. E. I., Oct. 27th, 1908.
L. M. TRASK, ESQ., St. John, N. B.
DEAR SIR:—I received receipt from you for payment of engine. I have used your engine on different kinds of work with perfect satisfaction. We had a careful scrutiny over different engines and I am satisfied we made a wise choice. I was doubtful for fear I did wrong in not taking your 5 H. P., but your 3½ H. P. has lots of power for me.
Yours, with respect,
P. CORNISH.

The L. M. TRASK CO.,
29 Dock St.,
ST. JOHN, N. B.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Quality of Butter.

The quality of butter depends to a great degree upon the food and drink of the cow. She should have clean, pure water and wholesome food. Much care should be taken in the selection of the ration. The individual cow has much to do in this regard. But with respect to the part that is played in handling the product of the cow, too much carelessness is evident in the process of butter-making. After churning is finished, the butter and milk mixture should remain quiet for about ten minutes, in order to let the butter come to the surface. A cup of cold water will hasten the process. An old recipe says: The butter should then be carefully skimmed off into a wooden bowl, half full of water. The water should be repeatedly changed until it shows no indication of milkiness. It is important that the butter should not be pressed or worked during the process of removing the milk from the butter. After this the butter may be pressed into a mass and salt to the extent of one-fortieth its weight worked into it. The water should be well pressed out, but the less worked, the more perfectly its granular character is maintained.

If butter is pressed firmly into earthen jars or wooden firkins, and kept at a temperature of 50 or 60 degrees it may be preserved in fair condition for six or eight months.

A Balanced Ration.

The manner of figuring a balanced ration for dairy cows puzzles many who attempt it.

Bulletin No. 127 of the New Hampshire college of agriculture sums the methods up in a very conscious way, and in words that will enable anyone who has learned to multiply and devide, to figure out a ration according to the concentrates and roughage available in his locality, which will be the best and cheapest as a milk producer. At this time when protein feeds are so high, as it is of great importance to find out which can be fed for the least cost and maintain a full flow of milk.

Bulletin No. 127 says: "The term 'nutritive ration' is so generally used by the students of feeding problems, farmers', institute speakers and the agricultural press that a thorough understanding of its meaning is necessary for all farmers who are trying to feed on a rational scientific basis. By 'nutritive ratio' is ment the raito or proportion of the digestible carbohydrates and fat in any given feed or mixture of feeds. It is found by multiplying the amount of digestible fat by 2.25 and adding the product to the amount of digestible carbohydrates and dividing the sum by the amount of digestible protein. The reason for multiplying fat by 2.25 is because it has two and a quarter times the fuel value of the carbohydrates and before adding must be brought to a carbohydrate basis. For example, let us find the nutritive ratio of clover hay, which has been found to contain 6.8 per cent. digestible protein 35.8 per cent digestible carbohydrates, and 1.7 per cent. digestible fat.

1.7x2 25=3.82.
3.82 plus 35.8=39.62.
39.62 divided by 6.8=5.8.

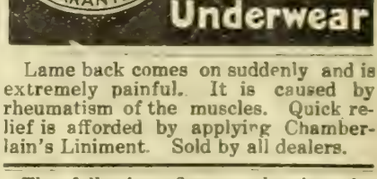
"This nutritive ratio of clover hay then is 1 to 5.8, the protein being expressed as 1.

"When the proportion of carbohydrates and fat is large, the variation is said to be 'wide' and when it is 'small' the ration is 'narrow.' Timothy hay, for example has a ratio of 1 to 16.7, which is wide; gluten feed has a ratio of 1 to 2.6, which is narrow, while clover hay has a ratio of 1 to 5.8, which is medium The feed or rations with a narrow nutritive ratio are as a rule more expensive than those with a wide one, because protein or nitrogen, whether purchased as a feed, a fertilizer or as a beef stake, always demands a high price."

Having the method of figuring made plain and a table showing the composition of the different feeds (which can be obtained at your experiment station) you are in a position to make up a good ration. It must be remembered that unless your table specifies "digestible" nutrients, you need to reduce it to that basis. For convenience I give below the per cent. "digestible," of common foods, taken from the same bulletin No. 127.

	Protein	Carbohydrates	Fat
Timothy hay	48	59	57 p.c.
Clover hay	55	57	53
Mixed hay	58	59	48
Oat hay	54	49	62
Oat and pea hay	76	65	68
Hungarian hay	60	67	64
Rowen (mixed)	69	66	67
Rowen (clover)	65	56	60
Oat straw	30	55	38
Corn stover	2	57	52
Corn silage	52	70	85
Clover silage	65	56	60
Corn meal	68	96	92
Corn and cob meal	56	84	84
Bran	78	56	68
Middlings	80	81	86
Oats	78	68	83
Wheat	86	94	81
Gluten feed	86	87	84
Hominy chop	77	94	81
Brewers' grain	79	56	94
Malt sprouts	80	62	100
Linseed meal N. P.	85	85	97
Cottonseed meal	88	'60	93
Sugar beets	91	100	50
Turnips	90	98	98
Pasture grass	70	74	63
Skim milk	94	98	100

As the feeding of different feeds materially affects the value of the exertions from the farm animals, it is of considerable importance to take this into consideration when making up a ration.



Lame back comes on suddenly and is extremely painful. It is caused by rheumatism of the muscles. Quick relief is afforded by applying Chamberlain's Liniment. Sold by all dealers.

The following figures showing the total fertilizing value of one ton" of feeding stuffs is taken from Farmers' Bulletin No. 21, U. S. Dept. of Agriculture by W. H. Beal:

Corn meal	$5.66
Corn silage	1.24
Crimson clover (green)	1 80
Crimson clover hay	9.71
Red clover hay	7.55
Gluten meal	15.53
Cottonseed meal	26.16
Linseed meal	19.36
Wheat	8.49
Oats	6.70
Skim milk	2.11
Timothy hay	4 60
Wheat bran	12.30
Wheat straw	2.18
Turnips	.96

It will therefore be seen that gluten, cottonseed and linseed are the most valuable in fertilizing elements, with bran fourth in the list.

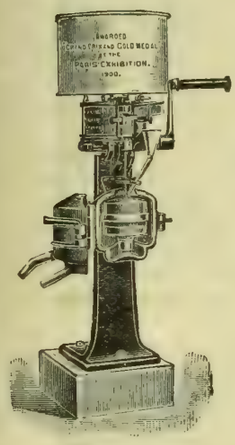
Locally, at present prices, one pound of digestible protein can be purchased at the following prices:

In gluten feed	6.8c
In cottonseed meal (best)	4.0c
In bran	.96

There is no doubt that there is much more bran fed than is really profitable, as far as the actual food constitutents are concerned, but a certain amount is very beneficial to the health of our animals, and it is possible it would be a

Still Here Selling Melottes After Twenty Years.

Melotte Cream Separators Pay to Buy.



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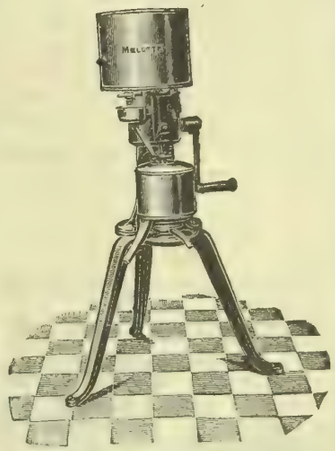
Testimonials from hundreds of users, some from your own district, sent FREE.

Write for particulars to Department "A."

The Best is always the Cheapest, although the first cost may be more.

GOOD LIVE AGENTS WANTED.



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Easy Terms —ON— Dairy Farm.

50 acre farm near Shubenacadie. 15 acres cultivated, 10 in pasture and 25 acres in woods.

Soil is clay loam, free from stones and farm now cuts 10 tons of hay.

House is 24x23 and barn 24x30. School ½ mile. Small orchard.

Price $700.00

Two Hundred Dollars down and One Hundred Dollars per year.

Write for further particulars, mentioning farm No A-43.

McCALLUM'S Limited, Truro, N. S.

mistake to reduce bran in the ration, especially where no silage or roots are fed.

A common ration here is two quarts of bran to one of gluten. I think there is much less cottonseed fed than formerly, as the quality is much less satisfactory, and a good many believe it is injurious to their cows. The cottonseed offered locally this fall is very dark in color, instead of quite golden or yellow as it formerly was. Dealers claim it is hard to obtain prime cottonseed.

Authorities differ considerably as to the amount of protein necessary to maintain the milk flow.

If I have figured correctly a ration of two quarts bran and one quart gluten feed fed twice a day, and 25 pounds of good mixed hay would give the following digestible protein :

	Lbs.
2 1-2 lbs. gluten feed	.56
2 lbs. bran	.24
25 lbs. mixed hay	1.45
Total digestible protein	2.35

Two and one-fourth pounds is no doubt quite ample for a cow producing under 25 pounds daily. Above that amount no doubt an extra quart of gluten could be added to each feed with good results.

If a cow goes naturally to milk and is losing flesh corn meal may be added to the ration to keep the cow in condition, for we do not want our cows poor at the end of the milking period, for nowadays most cows are milked to within a few weeks of the freshening and have little time in which to recuperate. A cow need not be kept in "exhibition flesh" but we all know a cow will give a much better flow of milk if in good "milking" condition when she freshens, and is more apt to come through the freshening ordeal in prime condition.—Hoard's.

Rockefeller Herd Profitable.

EDITOR MARITIME FARMER.

Perhaps there is no state in the union more often spoken of than wealthy New York. Three miles out of Tarrytown, a beautiful little village, situated along the banks of the Hudson and twenty five miles northwest of New York City, lies the farm of William Rockefeller, known as the Rockwood Hall Farm, now superintended by Mr. B. M. Hawks, who from all appearances has proved himself a competent manager.

Mr. Rockefeller has taken upon himself to equip this farm with the best utilities and finds that a splendid profit can be made by keeping fine stock. Profitable stock must be given proper attention and for this reason Mr. Rockefeller has all of the conveniences possible for the welfare of his entire herd of cattle. The stables are well built and well kept, care having been taken in planning same so that there would be no danger of the animals housed therein receiving an insufficient amount of fresh air and sunshine.

Owing to the fact that this dairy herd of cattle which have been imported during the last twenty-five years, directly from the Jersey Islands, where the contagious disease known as tuberculosis is unknown among cattle, and owing to the fact that these animals have never been in contact with any other cattle, caused Mr. Rockefeller very little alarm as to the condition of his herd, nevertheless as system has been his method along all business lines, he deemed it advisable to secure the services of a veterinarian to apply the tuberculin test to the herd in question, the test having been applied by the writer and which test showed each and every animal in the herd to be free from tuberculosis, thus not giving the owner the satisfaction of positively knowing that his herd was free from this disease but actually increasing the value of each animal in the herd.

The above illustration is a splendid proof that the germs of tuberculosis do not originate in a herd but are usually introduced by an infected animal.—Dr. DAVID ROBERTS.

Improved Roller Gear OF THE

"Puritan"

Reacting Washing Machine

This special feature alone, makes the "Puritan" the easiest running washing machine made. And the "Puritan" has several other improvements that are almost as important, to the woman who is going to use the "Puritan".

"Favorite" Churn

Is the favorite. There are more "Favorite" churns sold in Canada than all other makes combined. Patent foot and lever drive. Made in 8 sizes to churn from ½ to 30 gallons of cream.

If your dealer does not handle these household favorites, write us.

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St. Mary's, Ont.

THE BEST LINIMENT
OR PAIN KILLER FOR THE HUMAN BODY
Gombault's
Caustic Balsam
IT HAS NO EQUAL
For the Human Body
A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
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Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and
all Stiff Joints
We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.
REMOVES THE SORENESS--STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.
Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet B.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

PURE WOOL HEWSON AMHERST FABRICS
Hewson's Pure Wool Tweeds

LIVE STOCK.

Indigestion in Cattle.

The stomach of a cow is quite a different organ from the stomach of a horse. Cows are said to have four stomachs, but that is not strictly true; a cow has only one stomach divided into fours. We will just speak of these apartments as first, second, third and fourth stomachs. You all know the function of the first part which we call the paunch. It is simply a receptable for holding the partly masticated food, a kind of store-house where the animal lays up food that it will chew at leisure.

So far as disease is concerned, there are just two portions of the stomach that are of any particular interest to the farmer, that is the paunch and the third stomach, so we will just talk about the first and third stomach and say nothing at all about the second and fourth, because from the standpoint of disease they are of very small interest to the ordinary farmer. We may have a diseased condition in all the paunch if the animal gets a very large meal of some dry food and the process of digestion ceases. You will then likely have an impact condition. If the animal has had a large meal of some succulent food, for instance, clover or turnip tops, and then the process of digestion ceases, you are going to have in all probability a case of bloading, because that succulent food ferments rapidly, and when the process of digestion ceases, gases will be thrown out and the cow will bloat. A case of bloating in a cow may be serious or not; sometimes it is very serious and at other times not very much so. If your cow is only bloating in an ordinary way, tie a stick across her mouth having it around her horns, and turn her out for exercise and very often she will relieve herself in that way. Sometimes it is a very serious condition, and if the animal is bloating very extensively, and if the skin seems to be blown out just as tight as possible, and you have difficulty in finding out where the hip-bone is, then you have a bad case of bloating on your hands. I believe as a rule a man with a sick animal is acting wisely and in his own interests when he sends at once for a veterinary surgeon. Occasionally however, there is a case where there is not time to send for a veterinarian, and then you have to act for yourself when a case of bloating to that extent. The only way to successfully treat that animal is to puncture right through the skin into the stomach and allow the gas to escape.

More animals die from impaction of the third stomach than from any other digestive trouble. If you had a bloated animal suffering from the impaction of the rumen you will know it at once; but this attack of the third stomach comes on very insidiously, and the farmer does not realize that he has a sick animal until it is very far advanced in the disease. The first symptom of that would be what we call a capricious appetite. It will take its dinner all right, but does not care for supper, will possibly be ready for breakfast the next day, and then would care for no dinner. The animal does not show its usual inclination for food. Whenever you are feeding an animal, and that animal shows an indisposition to eat anything you are justified as a rule in coming to the conclusion there is something wrong with that animal's digestive system. If that be the case, if the stomack be tired and wants a rest, skip two or three meals and give good purgative doses, and the chances are that animal will be restored to its former digestive strength again. Many farmers prepare something nice and tasty and give to the animal, and in all probability that will increase the trouble; the disease will develop, and in the course of two or three days you will find the animal has no appetite at all. You will often find the contents of the third stomach become so dried out that it is hardly possible for medical treatment to restore it to its normal functions, and they cannot perform any operations to relieve that condition.

When the stomach is digesting there is the peristaltic action of the muscles, relaxing and contracting, and when the animal gets an attack of that kind its muscles are paralized, and we have to administer purgative medicine and also a nerve tonic in order to stimulate the action of the stomach. We administer strychnine in all cases of that kind in order to stimulate the vermicular action of the stomach. A careful feeder need seldom have a case of any impaction of the manyplies. A man who watches his animals can see this trouble in the beginning, and I don't think there is any trouble more easily removed if taken in time.

Feed your cattle carefully, and in order to do that you must have good, healthy, clean feed. When you begin to harvest your hay, see that it is cut in proper time, cured properly, and housed properly. Then feed it carefully, and you will never have an injury to your cattle from that hay. Then be careful when you are harvesting your

HEALTH, WEALTH, AND WORK.

So long as Nature's laws require that mankind shall work, the necessity of keeping one's self in health and strength is of first importance. Many people believe that men of great wealth do nothing. That is a mistaken idea. They may not work with hammers or shovels, but they work with their nerves, brains and minds. Scores of millionaires have worked themselves into nervous prostration in their efforts to control, *to avoid losing*, their millions. But it is the humble workers who suffer most.

Mr. Arvez Berten, of Robertville, Gloucester Co., N.B., is a sturdy man of 65, who works in the lumbering districts in winter, and who, therefore, must have good health. Some years ago, he suffered much from Dyspepsia, with headaches, dizziness and rheumatism. In a statement, dated June 24th, '09, he says he used only Mother Seigel's Syrup and four bottles cured him completely.

Cattle and Sheep Labels.
The greatest thing for stock. Now is the time to get posted. Write to-day for free sample and circular.
F. G. JAMES, Bowmanville, Ont.

Regular Habits
An Absolute Necessity For Good Health

You might as well expect to find a man or woman healthy with constipated bowels as to find a city healthy when its sewers are blocked with refuse.

Nature demands that the indigestible food and waste matter which collects in the lower bowels shall be got rid of at least once in twenty-four hours. If this is not done it decomposes, filling the bowels with poison, which is taken up into the blood and carried all through the body.

Naturally, this poison affects the work of every organ. *The liver is deranged, digestion is upset, and biliousness, headaches, lassitude and dizzy spells follow.*

Literally millions of people suffer these results of constipation without realizing the cause, or doing anything to remove it. Yet it can be removed, easily and with certainty, by using **Dr. Morse's Indian Root Pills.**

Take, for example, the case of Mr. George Andrews, Halifax, N.S., as he himself describes it:

"For many years I have been troubled with chronic constipation. This ailment never comes single handed, and I have been a victim to the many illnesses that constipation brings in its train. Medicine after medicine I have taken in order to find relief, but one and all left me in the same hopeless condition. At last I read about these Indian Root Pills. That was indeed a lucky day for me, for I was so impressed by the statements contained therein that I determined to give them a fair trial. They have regulated my stomach and bowels. I am cured of constipation and claim they have no equal as a medicine."

Dr. Morse's Indian Root Pills were first taken to cure constipation nearly a hundred years ago, and during the last half century they have been very extensively and very successfully used throughout the world. *They are entirely vegetable in composition and do not sicken, weaken or gripe like mineral purgatives.*

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For Constipation
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The Best Wall Plaster.
NO HAIR OR LIME NEEDED—
ANY MASON CAN APPLY IT.
The most convenient wall plaster known for farmers and others living in localities distant from central markets where lime, hair, etc., necessary for use in making ordinary mortar, cannot be procured without delay and expense. Rock Wall Plaster is put up in bags of 100 lbs. each and is ready for applying to walls by the simple addition of sand and water. It is a great time saver as it admits of carpenters immediately following the plasterers. Thousands of tons of it sold annually in the States and Canada. A success wherever used. Write for particulars to
ALBERT MANUFACTURING CO.,
HILLSBOROUGH, N. B.

straw, because straw is fed to a greater extent to the cattle than hay and quite properly so. Even if you have both hay and straw give straw, it is more easily digested than hay and it makes a nice part of the well balanced ration. Straw does not get the consideration and attention that it should, for it deserves just as mach attention as does the hay. It is just as important to have your straw cut at the proper time as it is to have your hay cut properly Our duty in this thing is to prepare our food and give it to the cattle in a good common sense way, and the they will not suffer from indigestion.—H. G. Reed in Weekly Witness.

Salt for Sheep.

Different owners of sheep, says the Farmer's Review, have different opinions as to how much salt should be given sheep. Some of our best shepherds furnish salt to their sheep so that it can be secured at all times. They believe that sheep should have salt just as certainly as any other animals.

When salt is kept before sheep at all times, it should be supplied in the form of large lumps of rock salt that can be licked rather than eaten. The feeding of fine salt to sheep is not to be advised if it is to be given in bulk and more than enough for one feeding.

On the other hand, some sheep herders on the western ranges never feed salt to their sheep, and say that they have excellent results. But in these cases they depend on the sheep finding alkali licks where they can satisfied their craving for minerals. But this practice is not commended by other sheep men who declare that the loco disease is most deadly where the sheep are allowed to frequent the alkali licks. They declare that the feeding of salt to the sheep in such localities greatly reduces the losses from the presence of the loco weed.

But this must depend on the constitution of the alkyli, which differs materially in different localities. Where it is the safest to use, it contains as high as 85 per cent of common salt. As a rule, it is safer to salt the sheep regularly or else give them a supply of rock salt, which they may lick as they crave it.

Where sheep are given ground grain and like condensed feed, it is better to properly salt the food. Some farmers sprinkle salt water over the hay given the sheep and find it a help to the digestive processes of the sheep.

Sheep are not different from other animals in their craving for salt. It is perhaps unfortunate for sheep that they have come to be looked upon as animals having characteristics entirely different from other farm stock.

Sheep Notes.

One good sheep will usually bring in more profit than two poor ones. Usually the poor ones are kept at a loss.

The best fleece will ever be the marke of the best sheep, provided, of course, that it has a good thrifty form.

The fleece and the carcass make up the sheep and if either is inferior, the sheep is inferior, no difference how good the other may be.

The end in view in keeping sheep is profit, and the question is how best to conduct the business to obtain a profit from the growing of wool or mutton.

Keep the best animals in the most economical manner and so breeding and manipulating the flock and fleece as to secure the best price for what is sent to market.

As far as can be done, the flock should be selected and culled so that there will be but one grade of wool—well-treated fleece—as no matter how meritorious each may be, the best prices cannot be realized.

To know how to care for sheep so as to make them grow the largest and finest fleeces and the most vigorous lambs is the most important part of flock management.

with strong rigid Wringer Stand

This new Wringer Attachment is "head and shoulders" above any other.

The entire stand is absolutely rigid —always in position—never in the way —and the water drains right into the tub.

"New Century" Washing Machine—complete and delivered at any railway station in Ontario or Quebec—only $9.50.

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PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

CATTLE FATTEN QUICKER --take on weight faster---make better beef --- when dehorned. Cows give more milk---and half the danger in shipping by rail or boat is eliminated.

KEYSTONE DEHORNER does the work in 2 minutes. Cuts from 4 sides at once. Write for free booklet.

R. H. McKENNA
219 Robert St. Toronto, Ont. Late of Picton, Ont.

THE HORSE.

Feed the Colt.

While every colt starts off with an inherent tendency to grow to a given size, this tendency may be hindered or helped by the feed and treatment the colt gets during its growing period, and more particular during its first year. Generally a colt starts off well enough on its mother's milk and fresh grass, but along in September when the milk flow dwindles and flies get bad, and the grass dry and short, the inherent tendency to grow gets a set back. It is at this time and later when weaning that extra feeding will help the inward 'urge' to keep on building up bone and tissue.

A colt that is weaned without a setback, whose milk flesh is kept on his ribs, and comes through the winter on good clean hay, straw or grazing, and some oats and bran, is more than half made. Generous feeding not only keeps the colt growing, but by keeping his system in good order develops a good capacity and a natural tendency to make the proper use of food. If a colt is brought along steadily and surely until maturity, he will carry a firm flesh, strong muscles and rugged constitution through life.

Neglect of a colt at weaning time means a runt with wobbly legs, humped back, bowed neck, and generally woe-begone appearance. Size and weight is what is demanded in horses now, and there is no easier way to get it than by helping nature keep what she gives.

Fitting Horses for Market.

Many farmers, though fully appreciating what 'fitting' means when appiled to cattle, sheep or swine, fail to realize its importance in the marketing of horses. No animal sold off the farm will pay better in fitting and feeding for market than the horse. Large horse dealers lay special stress on how a horse is fitted. If a horse is thin, when offered, they become suspicious and are inclined to believe that the animal is naturally unthrifty. Because of this the farmer who markets a thin horse, even though the horse is healthy, usually has to sacrifice much more than it would cost to properly fit the animal.

In fitting a horse for market several things must be kept in mind. If he is to be marketed during the winter it is an excellent plan to handle him in such a way as to prevent his hair from growing shaggy. This may be done by keeping him in moderately comfortable stables or by the use of a blanket early in the winter. A fair amount of exercise is always necessary to keep an animal in good form, more especially to keep his legs right under high feeding. It is never advisable to feed a ration consisting of corn alone to a horse that is being fitted for the market, it being much better to feed a mixture of such foods as corn, oats and bran, and so much the better if to these is added a little oil cake. Not but what a horse may be made fat by the use of corn, but rather that he is much more liable to take on good form if he is fed a variety of foods.

As to the amount of grain that should be fed per day to a horse that is being fitted for the market much depends upon conditions. Some animals will stand much heavier feeding than others, and the man in charge must use good common sense. The heavy horse will invariably eat fifteen or eighteen pounds a day of a mixture composed of corn, oats and bran. Unless the animal is obliged to perform heavy labor it is seldom advisable to feed more than this during the winter. Lighter horses, if just given enough work to properly exercise them, will usually make good gains on twelve or fifteen pounds of grain per day. After one has gone to the trouble to feed a horse properly for a time it is never advisable to market too soon, it being more profitable to bring the animal into high flesh before placing him on the market. While it is possible to overload the draft horse, yet this is seldom done, and mistakes are more frequently made by marketing such animals too soon rather than feeding them too long. A sound draft horse, weighing 1,600 pounds, while in moderate flesh might be worth from $125 to $150, but if the same animal is made to weigh 1,800 pounds the chances are he may realize $175 to $225 for his owner.

Value of Carrots.

Carrots are best fed whole to horses, which can well tackle a whole carrot, and there is no necessity whatever to cut them up into slices or pieces. Carrots are very useful for feeding to horses which have a cold or cough, as they have a soothing and emollient effect upon the mucous membranes of the throat, this being largely due to their succulent character It is, therefore, a good plan to include a liberal allowance —say, up to eight pounds—in the diet of horses suffering from cold or cough. On account of their great wholesomeness, their digestibility, and their palatability, carrots make an especially good food for sick and convalescent horses. When owing to sickness a horse is off its feed, it frequently relishes a few carrots in preference to other food, and the appetite of a sick horse can often be tempted in this way. Finely chopped up carrot from a useful kind of appetizer for mixing with other food when a sick horse does not eat his food properly.

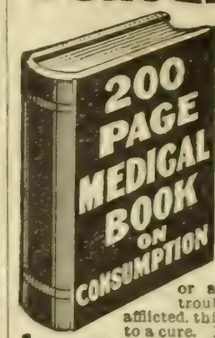
Feeding Crushed Oats.

Some diversity of opinion prevails as to whether it is desirable to crush oats in feeding horses or not. It is frequently held that the crushed oats are better and more digestible for horses than whole ones. Speaking in a general way, practical experience does not support this opinion, and as a general rule whole oats are to be preferred to crushed ones for horse feeding purposes. The molar teeth of a horse possess great grinding powers, and horses are able to masticate oats with perfect ease and without any trouble, so there is certainly no call to crush the oats with the view of facilitating their mastication under ordinary conditions. It is only when a horse's teeth are defective owing to old age, or to some other cause, that it may experience some difficulty in dealing properly with whole oats, and in that case it is advisable, if not absolutely necessary, to crush the oats. In the case of young horses under four or five years old, teething troubles sometimes temporarily interfere slightly with their powers of mastication, and when this is so it is expendient and desirable to feed the oats in a crushed state.

To sum up the whole subject, feeding of crushed oats, instead of whole ones, to horses is not to be recommended and is inadvisable under ordinary conditions. The only cases in which it is advisable or necessary are, firstly, when a horse's powers of mastication are impaired or deficient, so that it can not properly chew whole oats; secondly, when a horse is a greedy feeder, and in the habit of bolting unchewed oats wholesale, despite the admixture of plenty of chop to the corn; and, thirdly, when a shy feeder or bad one, evinces a partiality for crushed oats, preferring them to whole ones. Oates fed to foals should be given in a crushed state. Although foals can eat whole oats, and soon learn to do so, yet the latter are hardly suitable for them, being too hard, seeing that the masticating power of a foal is undeveloped and comparatively small. After they have been crushed, oats soon lose their freshness and quickly become stale. It is, therefore, not advisable to store crushed oats for any length of time, and they should always be fed in a freshly crushed state. When crushed oats become stale, they lose some of their palatability, and are not properly relished by horses.

J. M. ENGLAND.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1409 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

MAIL CONTRACT.

SEALED TENDERS addressed to the Post master General, will be received at Ottawa until Noon on Friday, 3rd December 1909, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, three time per week each way, between HATFIELD POINT and TOOLETON, from the first of February, 1910.

Printed notices containing further information as to conditions of proposed Contract may be seen and bank forms of Tender may be obtained at the Post Office of Hatfield Point, Tennant's Cove, Beulah, Downeyville, Belleisle, Toolston and at the Office of the Post Office Inspector at St. John.

G C. ANDERSON, Superintendent

POST OFFICE DEPARTMENT.
MAIL SERVICE BRANCH,
Ottawa, 20th October, 1909.

Our 60 Years' Experience

and continued success is a guarantee to You of Good Qual y and Fair Dealing.

We are offering for the next 30 days our No 15 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. If not satisfied we will refund the amount.

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leather blinds.

Breast Collar—Single strap.

Traces—1¼ wide; heavy single strap lined at both ends; sewed to breast collar.

Saddle—2¾ in., full padded; patent leather; swell skirts.

Breeching—Well made, with flaxseed stuffed cropper.

Reins—Cut from good leather.

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Are you preparing to attend the Agricultural College Short Courses?

Most Canadians Have Catarrh

Our Changeable Climate is Responsible.

Where the atmosphere is damp, with sudden changes in temperature, almost everybody has Catarrh, in some form or other. The ordinary cold in the head inflames and weakens the membranes lining the nose and throat, and starts a discharge. The next cold is more easily caught, and soon the patient is never quite free of it.

As Catarrh develops the discharge increases—drops into the throat, especially at night—and takes on an offensive odor. Besides being exceedingly disagreeable, there is great danger of the disease extending to the lungs, stomach, or bowels.

Though it is very difficult to cure, Father Morriscy devised a combined internal and external treatment that has cured thousands. The Tablets tone up and invigorate the system, and assist Nature in throwing off the disease, while the salve, applied up the nostrils, clears out the discharge and heals the membranes. Combined treatment, 50c at your dealer's, or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 20

POULTRY.

Wounded Pride's Reply to an Ungallant Rooster.

EDITOR MARITIME FARMER :

"An Ungallant Rooster," in the last number of the Maritime Poultryman has so deeply wounded my feelings that I seek a little space in your poultry columns, not for "re-dress", for I have now a lovely new suit, but to show the chanticleer that he knows not everything about hens' clothes and poultry management.

In September I was sent to Halifax with every stitch of my wardrobe complete. True, it was a little dust bedrimmed after so much wear and tear, but not enough tarnished to shake the vanity introduced into my little head a few months before, when I was "the cynosure of neighboring eyes," the envy of my sisters and the recipient of the bouquet, "the sweetest shaped thing in the show," from one of the foremost Canadian poultry judges. I was ambitious for new compliments and the metropolis I sought.

Presto, change. Humiliation was my reward for carrying so high a head. The second morning after my arrival here I became the subject of strange sensations. My strongest desire was to wallow in a sand bank to subdue the stinging and itching irritations all over my body. I became, too, intolerably sore and desired to avoid the company of my male consort, who, like my critic, proved none too kind. The following morning my disgrace was complete. When every button, safety-pin and device, known to female ingenuity for making things stay, gave way and I was left in chicken nakedness—not even having down to conceal my angles. Upon enquiry among my sisters, I found that this sudden disrobing is not uncommon; that it is induced by too liberal feeding after short rations and often by freight and over heating. Of the latter I had much experience on my way to the fair.

There is compensation, however, for the sudden bereavement, in knowing that in my new vestments I shall excel my sisters in the uniformity of my new dress, while theirs, in its long drawn-out growth, will look like shreds and patches. The first opportunity I have I shall arrest Mr. Poultryman by my perfect symmetry and handsome gait and tell him he is too callow in the poultry business to condemn Exhibition commissioners, managers and an indulgent owner for my singular misfortune.

GALLINA NUDA.

The Article That Wounded Gallina Nuda's Pride.

The foregoing letter is in reply to an article in the Maritime Poultryman, re the poultry show at the Halifax Exhibition. The article reads as follows :

"One specimen which we think deserves special mention was a Barred P. Rock hen that missed the money, and judging by her "hump" missed her feathers also, as she drew herself up in one corner of her coop perfectly nude, except for a neck boa or ruffle. This hen was a disgrace to the show and her owner, and a slight to the Exhibition Commmissioners and visitors, and a direct insult to the variety and breed that she would represent had she more than a few feathers.

"While viewing this poor hen we thought how anxious its owner must be to win all the money; also how any one could even think of exhibiting such a bird. Still, after all, one could almost expect to win somewhere in the money at this season with a nude hen, when two out of the three winning hens at a winter show need be only half feathered. Such happened last winter at a large show.

"It is high time that the management of various shows took a hand and debarred such birds from the show room. It would be one step to advance the interests of good poultry and more of it."

Fighting Red Mites.

In former years, early in the season, I have soaked the roosts of my hen house with crude oil, and have had but little trouble with lice or mites. This year, however, has been an exception. Through carelessness, or laziness, before I was aware of it, my houses were literally alive with the little red pests.

First, I tried my old remedy, kerosene, crude oil and crude carbolic acid. It did not seem to be of any benefit. I inquired of my poultry friends and found they were all in the same boat. I was advised to smoke the house with sulphur. I did that, and the lice only seemed to grow fat on that treatment. The next advice was to whitewash, and, with my spray pump, I literally soaked all the parts of the house, removing roosts, drop boards, and all movable things. The next morning the lice seemed to be just as thick on the roosts as ever.

I then tried smoking again with sulphur with the addition of tobacco dust. The lice seemed to increase on the roosts. Next, with a torch I burned the roosts every morning until the wood seemed to be all charred, and again they were just as bad as ever. I was advised to try boiling water, which I did a few mornings with the same results.

I looked in my poultry books, and they said to keep up a constant warfare, or something to that effect, but they didn't say what to fight with—shot gun or arbitration. I concluded the authors didn't know. Then as an experiment I dusted a bunch of lice with a little tobacco dust, and I was surprised to see them all die immediately. I tried the spray pump and whitewash again, and while the perches were still wet I sprinkled them liberally with tobacco dust, and the next morning the perches were all covered with lice—all dead. So I think I have solved the problem of red lice, as I haven't seen one since.—H. U. DURFEE, in "Farm Journal."

Effect of Feed on Character of Egg.

In extreme cases the flavor and the odor of the feed has been imparted to the egg. Onions have been fed in sufficient quantity to bring about this effect Feeds of high and objectionable flavor should not be fed by those who desire to produce a first-class article In no case should tainted feed be allowed to enter into the ration. Feed also has an influence on the color of the yolk. Corn fed exclusively will give a deep yellow or highly colored yolk, while wheat fed alone will produce a much lighter-colored yolk. A fairly high-colored yolk is usually preferred and can generally be obtained by feeding a moderate amount of corn. Plenty of green feed also enriches the color of the yolk.

Steel Oven
Heats Quicker—Saves Fuel

Pandora has a sheet steel oven, because steel is more sensitive to heat—absorbs it faster—than cast iron does. Pandora oven thus heats quicker—less time required to get oven ready for the baking—which also means less fuel-expense. ∴ ∴ ∴ ∴

Make sure your new range has a steel oven, and "Pandora" name-plate on the door. Go, at once, to nearest McClary Agency and pick out size desired.

McClary's Pandora Range

"Prince Crawford"

is the most economical range built to-day.

The flues are constructed so that the smoke and heated gases have to travel twice around the oven. All the heat intended for cooking is retained in the oven and cannot escape up the chimney

The **"Prince Crawford"** requires only one-half the fuel of ordinary stoves

The tops are polished like glass before being blacked. This will make them easy to keep clean and in perfect order.

All nickeled parts are easily detachable for cleaning. The **"Prince Crawford"** is made without elevated closet or without reservoir if so desired. We furnish any nickeling you may wish. Ask for illustrated catalogue.

A. BELANGER, Montmagny, Que. 20

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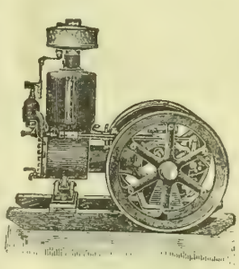
IS OUR
Stickney Gasoline Engine

No Frills. No Knick-Knacks.



Made to Grind Out Power.

You can learn to operate it in 5 minutes—No separate tank and pipes always in the way.

We Guarantee Power of Every Engine.

Send for our little booklet No. 57. After reading it you will know something about Gasoline Engines.

Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.

G. J. Barrett { Sales Agent } 82 Dock St. St. John, N. B. Branch at Fredericton, N. B

When a cold becomes settled in the system, it will take several days' treatment to cure it, and the best remedy to use is Chamberlain's Cough Remedy. It will cure quicker than any other, and also leaves the system in a natural and healthy condition. Sold by all dealers.

THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage. Address all communications to EVANGELINE, Port Williams Station, N. S.

Miss Slimmens's Boarding-House.

(Continued from last issue.)

But speaking of the hairdresser, and my w-g, and Mr. Morton, and bathing, brings me to the accident which I spoke of in the beginning, and to the most serial misfortune which has befell me since I left home. Oh. Dora, it makes me sick to think of it. Just when I was getting along so swimmingly. If I'd have stuck to my first resolutions, it never would have occurred. I said you would understand that I had reasons for resisting all inducements to go a bathing in the tuft. Of course, you, being acquainted with the little secrets of the feminine toilet, know it would have a very dilatory effect upon paint, false ringlets, etc , to get them wet. I didn't think I should come out of the trial quite as glowingly as the young girls, with red cheeks and plenty of their own hair blowing about, that laughed and frolicked, as independent as fishes, all around. Mr. Morton often solicited me to venture, and I always told him I was too much of a coward. Well, yesterday, we was standing watching the rest, and he said to me, so persuadingly : "Come, my dear Miss Slimmens, do try it. There's nothing like it for renewing the blood and making people get fat--good, substantial flesh. Sea-bathing is famous for fattening folks; it is the only charm in which you are lacking. Allow me to whisper that I understand something of feminine objections, and that I will insure you against accident. We will venture in but a little ways; I will support you; the bloom of your cheeks and the beauty of your curls shall not suffer in the least. I will take care of them. Go, prepare yourself; you will look charmingly in a Turkish bathing costume." I wanted to try it so much that I allowed myself to be persuaded. I entered one of those shanties, or camps, or whatever they call 'em, and got ready. My mind misgave me as I set foot in the water; but he assured me so firmly of his protection that I allowed myself to be led on. There was hundreds of people all about as, giggling, and shivering, and frolicking, and some of 'em ducking and letting the turf roll over them as if they were so many fishes. We only went out a little ways, for I wasn't very firm on my feet, and I was afraid one of those big waves would come up too close to us; but either Mr. Morton is very deceitful, or else the ocean is, for, just as I was standing there looking at the rest, and feeling the pressure of his arm about my waist, and only a little over knee-deep in water, along came a monstrous roller—and the next thing I knew I was gasping, and floundering, and smothering. I thought I was drowning. I never had such a fright but once previously, and that was when I took that arsenic. When I came to my senses a little, Mr. Morton was wiping my face with his handkerchief, and, of course, taking off every speck of artificial there was on it. "I'm very sorry, Miss Slimmens," said he, "that you've got wet. I'd no idea that breaker was so extensive. It almost took me off my feet, and I'm an old bather." But I didn't realize a word he said. I felt a cold sensation about my head; I put up my hand—oh, Dora, imagine my emotion—my w-g was gone. At the instance I made the discovery, the turf came rolling back again, and there, upon its foaming crest, floated my beautiful, my beloved, my expensive w-g. "Save it!" I shrieked. Adonis made a lurch for it—but it was too late: it was gone—forever ! Doubtless at this moment it is wildly tossing upon the cruel Atlantic, saturated with brine, its glossy ringlets torn nto a million separate hairs, while I sit here writing to you and deploring its loss. That isn't the worst of it, either. I looked about—horror of horrors !—every one was looking at us and laughing, even the children. I know that I must be a ridiculous figure. "Take me out; get me back into the camps, quick !" I exclaimed, and Adonis—it's second nature to call him by that name—assisted me ashore, looking as grave as a judge. I dressed as quick as I could; but when I came to tie that charming hat, so becoming to my long curls, upon my head, I felt that my glory was departed. Yet I was impelled to go to my hotel, and enter it in broad daylight in the face and eyes of a hundred staring men. If ever I realized the worth of a veil, it was then. I would have given all the money in my trunk for a yard of brown barege, but I had nothing of the kind along with me. The fright, and the embarrassment, and everything, has made me fairly sick; besides, I can't stir from my room until my hairdresser has completed another, which he is doing as fast as he can. Several ladies have knocked at my door, to enquire after my health, but I have not admitted a soul My only consolation under this afflicting dispensation is that my admirer, Mr. Hopkins, the widower, was not among the spectators—at least, I do not think he was. He was not on the beach, and from the hurried glance I cast at the windows and piazzas, as I entered our hotel, I concluded he was taking his noon nap. I trust I shall be myself again to-morrow, and that something decisive will then take place. I must leave here by the day after, as my funds will be exhausted by that period. So you may expect me to follow my letter up pretty close. If it should be a Mrs. Hopkins, instead of a Miss Slimmens, you are called upon to welcome, do not be surprised; curiouser things have happened. Pull Caturah's hair if she don't mind you. Tell Mr. Bethuen I'm convinced there's a great deal of sin and wickedness at watering-places. And be sure that Susan bakes that cake and frosts it. Don't let George see this letter. For a brief space yet, your affectionate friend, ALVIRA SLIMMENS.

P. S. Don't tell Mr. Bethuen about my dancing the polka; it's scarcely consistent with my position as a professor, and I suppose I hadn't ought to; but the temptation was irresistible, and if the folks at home don't get to talking and scandalizing about it, there'll be no great harm done I'm going to repent of it as soon as I get married, and settled down, and get things off my mind a little, so's I can have an opportunity to compose my reflections. I intended to be sorry for it when I done it, as soon as I had a good chance.

P. P. S. I hope Caturah hasn't got into them purserves on the top shelf of the pantry. Keep an eye on her, please.

CHAPTER XIX.

A COUPLE OF WALL-FLOWERS.

A wall-flower ? O no, I'm sitting here just to rest myself. I've danced and promenaded till I'm tired out. I don't think there's a young lady in the room been asked oftener than I have, this evening; but my health's rather delicate, and I don't desire to overexert myself. 'Tain't for want of solicitations to do otherwise that I'm resting myself, Mrs. Granger.

How does sea-bathing agree with my health ? Oh, first-rate. Jest observe that Mrs. Sullivan waltzing with that furriner; she flies around like a flounced top. If I was her husband, I'd put a stop to her conduct, or I'd shet her up in a convent. What conduct ? Oh, I don't know. Watering-places are awful things to spread talk, and all I know is what I've heard, and of course I don't purtend to believe all I hear. Anybody can see for themselves that she's a dreadful flirt, but that isn't proving that she's a bad woman. It's silly and vain of her to gallavant around the way she does, but that isn't saying I believe what I've heard, common talk as it appears to be. Oh, nothing; I'm not a-going to repeat scandal. Her name's mixed up with another person's oftener than is safe for her; but you must use your own eyes and ears, if you want to satisfy yourself. They say it was just the same way last summer, when she was here, only worse, if possible. Her husband bought a horse-whip one day, I've understood, and that a certain dashing old villain sought safety in flight, the same afternoon; but it's probably dreadfully exaggerated; see things commonly are. He's so generous to her, too—allows her two thousand a year, pin money; and she's always in debt, they say, for all. Anybody can see how fond he is of her, and she ought to be ashamed, going on and breaking his heart. If she'd make herself as pretty to him as she does to other men, she'd be doing a little more as she ought to. But don't breathe a syllable of what I've told you, Mrs. Granger, for I'm not certain it's true: and if it is true, it's none of my business.

Jest throw a look back over your shoulder at that couple standing by the window. Oh, nothing, nothing at all—only, if we stay here many days longer, maybe we sha'n't have to inquire. A body would think they wasn't conscious there was a soul but themselves in the saloon, they're so absorbed in each other. She needn't break her fan, if he does whisper to her in that killing style. There ! she's shivered it all to atoms, and now she's laughing and blushing about it. Probably he'll present her with another equally expensive and she'll accept it, if she is a married woman, and hadn't ought to. I never

Ask Her This Question

"Do you know of any woman who ever received any benefit from taking Lydia E. Pinkham's Vegetable Compound?"

If any woman who is suffering with any ailment peculiar to her sex will ask her neighbors this question, she will be surprised at the result. There is hardly a community in this country where women cannot be found who have been restored to health by this famous old remedy, made exclusively from a simple formula of roots and herbs.

During the past 30 years we have published thousands of letters from these grateful women who have been cured by **Lydia E. Pinkham's Vegetable Compound,** and never in all that time have we published a testimonial without the writer's special permission. Never have we knowingly published a testimonial that was not truthful and genuine. Here is one just received a few days ago. If anyone doubts that this is a true and honest statement of a woman's experience with Lydia E. Pinkham's Vegetable Compound write and ask her.

Canifton, Ont.—"I had been a great sufferer for five years. One doctor told me it was ulcers of the uterus, and another told me it was a fibroid tumor. No one knows what I suffered. I would always be worse at certain periods, and never was regular, and the bearing-down pains were terrible. I was very ill in bed, and the doctor told me I would have to have an operation, and that I might die during the operation. I wrote to my sister about it and she advised me to take Lydia E. Pinkham's Vegetable Compound. Through personal experience I have found it the best medicine in the world for female troubles, for it has cured me, and I did not have to have the operation after all. The Compound also helped me while passing through Change of Life."—Mrs. Letitia Blair, Canifton, Ontario.

Any woman who is sick and suffering is foolish surely not to give such a medicine as this a trial. Why should it not do her as much good as it did Mrs. Blair.

saw him before to-night. Do you know his name? Her husband? Oh-h-h, that makes a difference, of course; but I should think they'd better keep their love-making for their own private entertainment. If there's anything really sickish, it's this billing and cooing between married people in public.

O dear, did you ever? That dress takes the rags off the bush! If it was a little shorter at the bottom, and a little longer at the top, it would be improved. Sweet, did you say? Oh, it's pretty enough, and too pretty. They say she's ruining her husband by her extravagance. That's the twentieth dress I've seen her have on since I came. But anybody with a pair of shoulders like them must set 'em off, at any price, if their husband is ruined, and their character, too. Black eyes and white necks are very nice, but they don't make good wives, as some men know to their sorrow.

What a sweet young man! Do you know him? I feel sure he is a poet—he has such a pensile appearance, and such a high white forrid. I wish I was introduced to him. It's pleasant to meet a congestive breast in a scene like this. O yes, I sometimes woo the Muses, simply for my own pleasure. I've published a few pieces, but I don't purtend to be an authoress. The most of my suffusions slumber in the retiracy of my portfolio. If the world chooses to claim them after I'm dead, it can have them. I shall leave them copied out in a clear, eligible hand, simply for the benefit of my friends. I've been solicited to publish a volume of my fugitive productions, but have ever hesitated. Of course, "filthy lucre" would be no inducement to a person of my means, and I'm indifferent to the bugle voice of fame.

You don't say so? Worth a million dollars? Of course he married her for her money, for she's as humbly as a mud fence. Silks and satins can't make her handsome. Isn't she dreadful yellow? She looks like a piece of white silk that's been washed and ironed. Got a high temper, too, I'll bet, by the turn of her nose and the look of her eyes. Her husband seems utterly subdued; I'll bet she snubs him. He looks as if she was continually telling him how much money she had brought him. It's good enough for him, though; shouldn't have made such a fool of himself. If anybody should marry me, and I should have reason afterwards to suspect it was my means they married, they wouldn't lead a very easy life of it; I'd keep 'em as uncomfortable as a kernel of corn on a hot griddle. If I ever do make up my mind to except any of the male sex as a husband, I shall wed from love alone.

See them young chits, dancing and talking, and flirting like so many young ladies. They ought to be spanked and sent to bed! I don't know what their mothers can be thinking of, to let 'em carry on so in a public house. Anxious to get 'em married off, I suppose; mothers'll go any length, nowadays, to get rid of their daughters. If I'd went and gone, and had children, I think I'd take care of 'em till they was of age, and not put 'em up in market, and show 'em off to the best advantage, like a milliner the bunnits in her show-window. Puts you in mind to ask if I was ever a milliner? Do you intend to insult me? Oh, you'd heard; well, people shouldn't believe all they hear, 'specially at watering-places. I've heard you used to be a vest-maker before Mr. Granger married you, and that you made a vest for him the way he came to fall in love with you. Of course you'll deny it, but people that live in glass houses sheuldn't throw stones. For my part, I consider one honest person as good as another, whether they ever did anything for a living or not; but low people, that have got up in the world suddenly, generally put on airs. If I ever had been a milliner, I shouldn't be ashamed of it.

(To be Continued.)

They Didn't Have to Change.

During the years in which our pure food laws have been put into effect there has been a great hurrying and scurrying on the part of the food manufacturers to change their methods to make them conform to the law.

The Quaker Oats Company is a conspicuous exception. It was admitted that Quaker Oats was as pure and clean as possible and that it was an ideal food. The purity and cleanliness of Quaker Oats is familiar to every one who has compared it with other brands of oatmeal.

It is so cheap that any one can afford it and so nourishing that everyone needs it. The result of last year's experiments at Yale and other points where food values were tested is that Quaker Oats has been adopted by many persons as their food on which they rely for adding vigor and endurance of muscle and brain. 4

Cowan's "Perfection" Cocoa

is made from the finest carefully selected cocoa beans, roasted by a special process to perfect the rich chocolate flavor. Cowan's is most delicious and most economical.

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KNITTING MACHINES
HOME MONEY MAKERS

Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—Q. R. S. T.

Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS. 2
Box 598 GEORGETOWN, Ontario.

One of the Causes of Defective Teeth.

The reason why our teeth decay so early in life is because the enamel is too thin and soft; it gets worn through by the acids formed in the mouth, and then the dentine quickly decays. One of the chief causes of defective teeth-enamel is the artificial feeding of infants. Mother's milk contains all the elements necessary to build up every portion of the body, which the most scientifically prepared drink does not. After weaning, plenty of cows milk and a little cream are the best tooth builders. Of course, later in life our soft and highly mixed diet is detrimental to the teeth, but the mischief really begins in infancy and childhood when the teeth are forming.

How Weather Changes Bring Death to Roofing
The life of Roofing is Saturation and Coating. Yet this vital part is sorely neglected by nearly every Roofing maker.
The Basis of most Roofing, except Brantford, is wood pulp, jute or cotton-cloth—all short fibred.
When it passes through "Saturatory Process," it does not become actually saturated—merely coated.
This "Coating" is of refuse and quickly evaporates—wears off—exposing foundation to savage weather. It absorbs water and moisture, and becomes brittle, cracks, rots and finally crumbles.
Even when new it softens under heat, sagging and dripping. But the Foundation of Brantford Crystal Roofing is a heavy, evenly condensed sheet of long-fibred pure Wool, saturated with Asphalt, which is forced into every fibre—not merely dipped. It is heavily coated with time-defying, fire-resisting Rock Crystals, which require no painting. This special Coating cannot evaporate and protects insides. Brantford is indestructable, pliable, tight, water, weather, spark, acid, alkali, smoke, fire-proof
Brantford Roofing
cannot absorb moisture, freeze and crack in cold weather, or become sticky and lifeless in hot weather. Brantford Crystal Roofing is not the kind all manufacturers care to make, because it costs extra money, yet it costs you no more than short-life Roofing.
Roofing Book and Brantford Samples are free from dealer or us. Brantford Asphalt Roofing, Nos. 1, 2, 3. Brantford Rubber Roofing, Nos. 1, 2, 3. Brantford Crystal Roofing, one grade (heavy) Mohawk Roofing one grade only
MOHAWK ROOFING
N°2 BRANTFORD ASPHALT ROOFING
N°2 RED RUBBER ROOFING
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The wire for "Maritime" Wire Fence is imported direct from England. We have found that this English wire is distinctly superior. While stiff and hard it is not brittle, or as easily broken when subjected to a severe strain as the ordinary hard steel wire. It is real "live" wire, pliable and springy, capable of withstanding hardest usage and unaffected by any degree of temperature recorded in this country.

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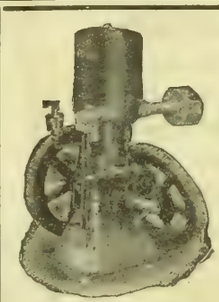

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Consult J. J. MacLEOD,
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Manufacturer and Designer in all the best grades of Marble, Granite and Freestone
All orders will receive careful attention and prompt delivery. Good workmanship at lowest prices.

The Bovine Tuberculosis Problem.

(Continued from last issue.)

If a LARGE PROPORTION OF THE HERD IS FOUND TO BE DISEASED.—In this case if the reacting animals are valuable breeders, they may be isolated and kept for breeding purposes by removing the calves at once and feeding them on milk of healthy cows, or on the sterilized milk of their mothers. This is called the Bang method, a procedure devised by Professor B. Bang, of the Compenhagen Veterinary College. The method is as follows:

(1) Test every animal in the herd with tuberculin.

(2) Remove the reacting animals, and keep them isolated so that the disease cannot be transmitted to the healthy animals, either by contact, by attendants, or by the same feeding or drinking utensils.

(3) Disinfect the stables to prevent transmission of the germs left by the infected animals.

(4) Test the healthy herd with tuberculin regularly to detect any case that may develop and remove such animals before they spread the disease. Disinfect again.

(5) Remove the calves from the diseased herd at birth and feed them milk from the healthy cows or milk from the diseased cows which has been thoroughly pasteurized (heated to 185°.).

As the sound herd is replenished, the isolated cattle may, if desired, be fattened and killed, under proper inspection, for beef.

Bang's method, as carried on in Denmark, proves that the disease can be weeded out in a practical manner. But in many of the herds in which the method was tried, a varying number of animals were found that afterward reacted positively to subsequent tests. These partial failures, amounting in all to about 12%, he attributes to carelessness in maintaining complete separation of reacting herds from healthy ones, and incomplete disinfection. The method has been followed by good results in Norway and Sweden, and also Hungary. The reports show that many highly infected herds have been absolutely freed from the disease in four to six years. Several experiment stations have applied the Bang method in this country. Professor Russel of Wisconsin, has been especially successful. The New York Agricultural Experiment Station, Geneva, N. Y., has issued a bulletin reporting complete success in the eradication of tuberculosis from the station herd. The method offers a remedy which safeguards health, while giving the stockman a chance to perpetuate valuable strains of blood and mitigate his financial loss.

The problem of obviating the transmission of infection from the reacting herd to the healthy is very important. The two herds must not be permitted to mingle in any way while at pasture or elsewhere. A partition in the stable and new fencing are the chief features in accomplishing the separation. Instances have been reported where the disease has been apparently transmitted to cattle in adjourning pastures. It is possible that this was done by the cows licking one another across the fence. When applying the Bang system the same drinking trough must not be used for the two herds, even when it is divided by a partition. In highly infected herds the possibility of a continuation of infection in stables, corrals, and pastures, after all the reacting animals have been removed, is relatively greater than when only a few have been diseased. This is especially marked in stables that have been in constant use for a number of years. Where new buildings are erected in introducing the system, it is advisable to place the non-reacting animals there rather than the reacting ones. Remove the healthy from the diseased, rather than the diseased from the healthy.

PREVENTION OF TUBERCULOSIS.

Those dairymen who have been doing business in a small way, and have unfrequently or never purchased animals, may have herds free from tuberculosis.

IT MADE A MAN OF ME!

Read What Nelson Rose, of South Bay, Ontario, Says:

Dear Sir,—One year ago last February I was taken with Nervous Exhaustion (the Doctors pronounced it). I suffered all the tortures of that disease; was all run down, so weak I could hardly do anything at all. Since I began to use your Belt there has been a marked improvement in my condition in the different ways mentioned. I have slept good every night since wearing your Belt, which is one of the greatest blessings of mankind. I have a great deal more ambition; work used to seem such a mountain, now it seems more a pleasure; more strength and vim; memory better; digestion better; constipation about gone, which I was bothered with a great deal; head feels better and I feel far better in every way.

Give me a man broken down from dissipation, hard work or worry, from any cause which has sapped his vitality. Let him follow my advice for three months and I will make him as vigorous in every respect as any man of his age.

M. F. McLaughlin:

Dear Sir,—My case has certainly been a very serious one, and one of long standing. I had latterly been unable to do any work at all. Your Belt has worked wonders in my case, as I am working steady now. It is well known here that it is your Belt that has put me on my feet again, and no doubt will be the cause of other sales to you.

WILLIAM J. BYERS, Nipissing, Ont.

Dear Sir,—I am writing to you to-day to tell you the good your Belt has done me. I can say in this letter that I am a well man, and have worked every day from the time I gave up wearing the Belt. The sharp pains I had in my back and chest are all gone, and I need not walk with my nose on the ground now. I am in good health, and feel as strong as I want to be, and more than pleased with the Belt.

JAMES HATT, Beech Hill, N.S.

Letters like that tell a story which means a good deal to a sufferer. They are a beacon light to the one who has become discouraged from useless doctoring. I get such letters every day.

My Belt has a wonderful influence upon tired, weak nerves. It braces and invigorates them and stirs up a great force of energy in a man.

Are you weak or in pain? Are you nervous or sleepless? Have you **Varicocele, Rheumatism, Weak Back, Kidney Trouble, Weak Stomach, Indigestion, or Constipation?** Are you lacking in vitality? I can give you the blessing of health and strength. I can fill your body with vigor and make you feel as you did in your youth. My Electric Belt is worn while you sleep. It gives a soothing, genial warmth into the body. This is life—vigor.

After you have read the above, write to me, explain your case, and I will at once tell you if I can cure you or not.

To prove to you the confidence I have in the curative power of my Belt, I am willing to accept your case, and after I have cured you then pay me. All I ask is reasonable security. You may then use my Belt at my risk.

Tell me where you are and I'll give you the name of a man in your town that I've cured. I've got cures in every town. That's enough. You need the cure. I've got it. You want it. I'll give it to you or you need not pay me a cent. Come and get it now. The pleasurable moments of this life are too few, so don't throw any away. While there's a chance to be husky and strong, to throw out your chest and look at yourself in the glass and say "I'm a man," do it, and don't waste time thinking about it.

CALL TO-DAY—Come and see me and let me show you what I have, or if you can't, then cut out this coupon and send it in. It will bring you a description of my Belt and a book that will inspire you to be a man among men, all free. My hours, 9 a.m. to 6 p.m.; Wednesday and Saturday to 9 p.m.

Put your name on this coupon and send it in.

M. A. McLAUGHLIN,

214 St. James Street, Montreal, Canada.

Send me your Free Book, closely sealed, and oblige.

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Canada's Best and Best Known Felts

Kimmel Felt Shoes and Slippers are for all men, women and children — young and old.

And the Kimmel trademark is on every pair.

Styles to suit every use and every taste — each the best at the price that money can buy.

Ask your dealer for "Kimmel" Felts.

52

DIP YOUR SHEEP

tockmen and farmers who use the Cooper s have healthier animals—get more wool l better prices. More than half the cloth l flannel of the world is made of Cooper dip- l wool. Tanks supplied at cost to all users of Cooper Dips.

COOPER'S POWDER DIP

The leading sheep dip for 65 years. Used on million sheep every year. Kills ticks, lice, s and eggs in one dipping. Does not stain wool, but increases the yield and improves quality.
rices 25 gal. pkt. 50c., 100 gal. pkt. $2.00.

COOPER'S FLUID DIP

all animals. A highly concentrated, non-sonous fluid dip of marvelious strength es readily with cold water, whether hard, ckish, or salty. The only pure liquid dip—sediment. Goes farther than Coal Tar dips !, therefore, cheaper. For b, mange, ticks, lice, ringworm, eczema, es, bites, stings etc. One gallon makes 200 lons for general dipping, or 300 gallons for nfecting.
rice—Qt. can 75c. 1 gal. can $2.00, 5 gal. can 0.

OOPER'S WORM TABLETS

sure remedy for intestinal worms in Horses, ep, Cattle and Hogs. These tablets offer the at advantage of correct doses and certain re- s. Dose—one tablet for lamb or shoat, two sheep or hogs, three for horses and cattle.
rice—10 tablets 20c. postpaid, box of tablets, $1.00, postpaid.

COOPER'S "LAVENE"

he most effective skin dressing for Horses, le and Dogs. Cures worst cases of Mange Ringworm at one dressing. Searches the and attacks the disease at its root. Im- es the coat and renders hair soft and glossy. sed by many of the best breeders in prepar- animals for show.
rice Qt. can $1.00, Gal. can $3.00. CAN- AN DRUG CO., LTD., ST. JOHN, N. B.

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Honest Assortment

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GILSON Gasoline ENGINE
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DIEU ET MON DROIT

IAIL CONTRACT.

ALED TENDERS addressed to the Post- r General, will be received at Ottawa until on Friday, 10th December, 1909, for the con- ice of His Majesty's Mails, on a proposed act for four years 6 and 3 times per week way, between CODY'S and COLE'S ISL- from the Postmaster General's pleasure. ited notices containing further information conditions of proposed Contract may be nd blank forms of Tender may be obtain- the Post Office of Cody's, Cole's Island and offices and at the Office of the Post Office ctor at St. John.

G. C. ANDERSON,
Superintendent
OFFICE DEPARTMENT
MAIL SERVICE BRANCH,
wa, 23rd October, 1909.

The trouble of making a test is so slight that one should never neglect ascertaining the facts. Early discovery will enable the owner to forestall serious trouble later. In purchasing cattle a man can not assume that there is a slight risk of purchasing tubercular animals. On the contrary, he must regard every animal as tubercular until the contrary is proven. This will become all the more necessary as the use of the tuberculin test increases. Well-bred animals are particularly liable to show tuberculosis on the test. The herd from which they come have been built up by many purchases from far and wide, with no precautions, which assures the introduction of tuberculosis. An animal purchased on the test should preferably be isolated for three months, and then be tested again before exposing the clean herd to possible infection. As previously explained, one test can not be implicitly relied upon.

The most common method of introducing tuberculosis is probably by the purchase of diseased animals. Next to "buying in" the disease, the feeding of raw skim milk from the creameries is to blame. Do not feed skim milk that comes from another herd to calves without first sterilizing it. Prevention is simple. The disease is produced by tuberculosis germs, and if we keep the bacteria away from the cattle, they cannot possibly develop tuberculosis. Although, experimentally, cattle can sometimes be infected by injecting the virus from tuberculous human beings, it is a question if infection ever takes place naturally.

Vaccination, or the immunization of cattle against tuberculosis, is now being advocated by some scientists. The methods are as yet in the experimental stage, and the effectiveness of vaccination can not be predicted at this time.

A. R. WARD & C. M. HARING,
Berkley, Cal.

Absorbents.

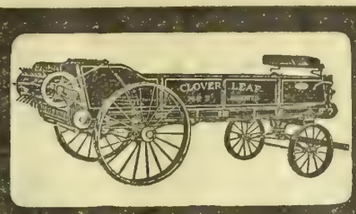
(Continued from page 75.)

benefit derived from it as a manure, The fertilizer value as shown by analysis is not the only consideration, since the straw will furnish humus to the soil, which will likely benefit the land as much as the actual plant food added will do. I have often been asked whether it will pay to draw the straw to the field and apply it? Certainly it will if there is more than can be utilized as bedding for the cattle to pick over of cold winter days. Straw is worth applying to the field at any time it can be done.

A New Potato Sorter.

The improved potato sorter, fitted with a sorting platform, which is being placed on the market by Messrs. Cooch & Son, of Commercial Street, Northampton, will be interesting to colonial readers. It is a simple, strong and cheap machine, easy to work and readily moved from place to place. It separates the potatoes into three sizes at the rate of from 30 cwt. to two tons per hour, and effectually removes the soil. The tubers are divided into 1 cwt. bags, and these are arranged so that the machine can be worked continuously, one bag being removed while another is being filled. The seeds and chats are delivered at the side, the soil falling underneath. The sorter can be adapted for onions, bulbs, chemicals and many similar purposes. The sorting platform consists of a canvas with laths attached, which travels slowly and conveys the potatoes along, thus enabling the user to remove all blights or badly shaped potatoes. It is driven by gearing direct from the crank spindle. —Commercial Intelligence.

Many school children suffer from constipation, which is often the cause of seeming stupidity at lessons. Chamberlain's Stomach and Liver Tablets are an ideal medicine to give a child, for they are mild and gentle in their effect, and will cure even chronic constipation. Sold by all dealers.



ARE YOU SATISFIED WITH A 20 ACRE CROP FROM A 40 ACRE FARM?

YOU know it costs as much in time, labor, seed and implements to raise a poor crop as it does to raise a good one. You know also that unless your land is kept constantly supplied with lime, nitrogen and phosphates and the ingredients of barnyard manure it becomes worn out and loses its fertility.

You know further that it costs more, and trebles your labor, to spread manure by hand than it does to use a well-made manure spreader.

Maybe you don't know that one load of manure evenly spread by a mechanical spreader is worth four loads scattered by hand—

And that your crop, whether rotation or continuous, will be increased from 20 to 40 per cent by the use of an

I. H. C. Manure Spreader

Made in two styles as follows:

The Corn King, Return-Apron Spreader.

The Cloverleaf, Endless-Apron Spreader.

I. H. C. spreaders are made of the best material—wood and steel. They have powerful steel frames and steel-bound boxes, which damp manure cannot rot.

I. H. C. spreaders are easily drawn. They can be adjusted to spread a thin or heavy coat with equal evenness.

I. H. C. spreaders are so simple in operation that a boy can do the work which used to require a strong man.

An I. H. C. spreader will save in time and labor more than enough to pay for itself in one season.

Your increased income from better crops will be clear profit.

Scientific experiment has proved that this profit will vary from $4.00 to $20.00 per acre.

You cannot afford to be a half-crop farmer and there is no reason why you should be one.

An I. H. C. spreader will give you the full return from your land, whatever the size of your farm.

Call on our agent in your town and talk the spreader over with him, or, if you prefer, write nearest branch house for catalogue and other information.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

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We have many depositors who have had their Savings earning them only 3 p. c., **now holders of our 4 1-2 p. c. Debentures,** thus **increasing their Income** in this respect just **50 p. c.**

Remember the Government authorizes Trustees, Executors, etc., to invest in these Debentures.

Terms 1 year up. Price par. Rate 4½ p. c.

The Eastern Canada Savings and Loan Compauy, Ltd.,
Head Office, 187 Hollis St, Halifax, N. S.

Ninth Annual
Maritime Winter Fair
AMHERST, N. S.
December 6, 7, 8 and 9

The Educational Fair of The Maritime Provinces

Programme of Lectures each evening, by Gentlemen, who are Recognized Authorities on Various Subjects.

Judging Competitions, open to Farmer's Sons, who are not College Students

As well as the following, donated by **Barkers' Ltd.,** Department Store, Amherst. 1st, Motor Coat, value $12.00; 2nd, Leather Dress Suit Case, value $8.00; 3rd, English China Tea Set, value $5.00. Best judging of dressed chickens, ducks, geese and turkeys. Highest score of best and best dressed birds and correct placing of first three selections of each to determine position. Open to farmers' wives and daughters in the Maritime Provinces, not members of the Amherst Hospital Aid Society.

Every Person Interested in Agriculture Should Attend.

Special Rates on all Lines

F. L. FULLER, = = = = **Secretary-Manager**

Last Call to the Winter Fair.

The Ninth Annual Winter Fair will be held at Amherst, N. S., on December 6th, 7th, 8th and 9th. An excellent prize list has been presented and the management informs us that the entries in the various classes exceed that of any previous year. His Excellency, Earl Grey, Govenor General of Canada, assisted by the Lieutenant Governors of the Maritime Provinces and the Hon Minister of Agriculture will perform the opening excercises. Interesting lectures will be delivered each evening by competent speakers on agricultural questions. Come one come all.

STOCK NOTES.

H. S. Pipes, Amherst, N. S, Writes: The Annual meeting of the Canadian Jersey Cattle Club will be held on December 8th at 2 o'clock p. m. in the Winter Fair building, Amherst, N.S, Jersey breeders of the Maritime Provinces, please take a note of this date as it is to the interest of all Jersey Breeders to support the C. J. C. C. this meeting we want to appoint a delegate to represent the Maritime interests at the annual meeting at Toronto of the Jersey Club.

PUREBRED HORSES FOR NEW BRUNSWICK.—At the sale of Clydesdales in St. John on 14th December, three young stallions will be among the offerings. No. 1 Ace of Spades is a grand, thick, good-sized, blocky horse of choice breeding. He is sired by the renowned Wooden Hartley. He is thoroughly sound and has proved a very sure foal getter his stock showing up among the best. No. 2, Southwick is an extra good three year old, large and smooth, brown in color, is perfectly sound and has shown his ability as a sure breeder. He was sired by Benedict by Baron's Pride, his dam by Prince Sturdy. No. 3, another three year old is a choicely bred stallion particulars of breeding are not yet received. Of the 65 fillies which will be offered great care has been taken in the selection. Most of them are strongly bred in the Baron's Pride strain and the majority of them were served in Scotland by good stallions.

POTATOES.

It never pays to rush the fall market in potatoes, especially when Cold Storage is at hand for overcoming the ordinary shrinkage in store. We can quote on straight storage or on bulk receipts, barreled, stored, stowed and delivered to steamer or car, as ordered. Write for our proposition.

The New Brunswick Cold Storage (Limited), 672-690 Main St. ST. JOHN, N. B.

F. C. WESLEY CO.

ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street, St. John, N. B.

Dates to Remember.

Maritime Winter Fair, Amherst, N. S., December 6, 7, 8 and 9th, 1909.

Annual meeting of the Maritime Poultry Association, Winter Fair Building, Amherst, N. S., Dec. 8th at 10 A. M.

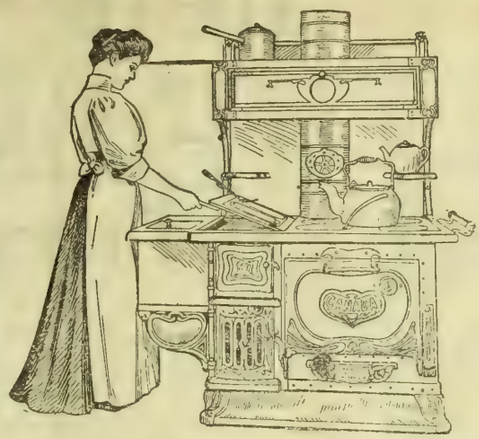
Prince Edward Island Poultry Show, Charlottetown, P. E. I., January 5, 6, 7 and 8th, 1910.

Westmorland Poultry Show, Moncton, N. B., Jan. 13th, 14th and 15th, 1910.

Nova Scotia Fruit Growers' Association, Kentville, N. S., December 1st, 2nd and 3rd, 1909.

Prince Edward Island Fruit Grower's Association Annual Meeting and Fruit Show, Charlottetown, P. E. I., December 2nd and 3rd 1909.

Summerside Seed Fair, March 9th, 10th and 11th 1910.



The Stay-Satisfactory Kind of Stove

will fill the heart of an ambitious housewife with joy. Steel frames and plates and firm rivetting result, in the NATIONAL, in an oven that is, to all intents and purposes, hermetically sealed. It will stay that way for ten years, for twenty years, and even longer.

All the time it will cook more quickly, more perfectly, and will burn less fuel than any other stove manufactured. It is air tight and dust tight. If you have fire enough to heat the top of a National for cooking, the oven is ready for baking too—no special "firing up," no wasteful piling on of fuel. You cannot make a more complete mistake than to buy an inferior Stove which seems to be cheap, but for which you will have to pay three or four times its first cost on repairs and wasted fuel.—Buy the **National** and buy the **best.**

FIRST COST IS THE ONLY COST OF THE NATIONAL.

It will give us pleasure to show you the advantages of the National line it you will write us or call at one of our stores.

MADE ONLY BY

The MOFFAT STOVE CO., Weston, Ont., Calgary, Winnipeg

If NATIONAL Ranges are not for sale in your town, send direct to Our Weston office for Circulars and Prices delivered safely to your nearest station.

A cold is the "open door" for consumption and must be taken seriously from the start.

Soothe the delicate tissues of the throat and fortify the system with

SIMSON'S-FLAXSEED-EMULSION

and the danger can be easily avoided. You'll enjoy taking it too—it has such a pleasant taste and is perfectly harmless even to the most delicate stomach. Twenty-five cents a bottle at all dealers.

THE NATIONAL DRUG & CHEMICAL CO., OF CANADA, LIMITED, HALIFAX, N. S.

Near Skowhegan, Me.

200-acres, potato land, cuts 50 tons of hay, machine worked fields; 20 cow pasture. 1500 cords wood. 100,000 timber, 40 rods to saw mill, 150 bbls. apples in season, splendid house, barn, stable all clapboarded and painted, value of buildings over $4000, running spring water. To close immediately will include farm tools for $2500. In the spring $5000. or $6000. would be a fair price. For traveling instructions see page 126 "Guide 28," copy free. E. A. STROUT CO., Kent's Hill, Maine.

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING, ARGYLE ST.,

Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application TELEPHONE 1905.

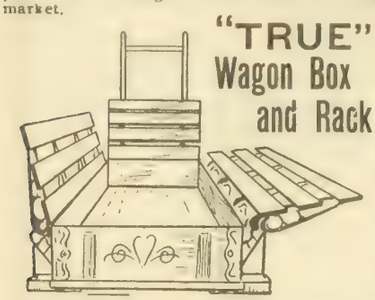
F. B. McNUTT & Co.,

Marble and Granite Dealers,

Queen St. Truro, - - N. S.

Up-to-Date Specialties For Farmers And Gardeners.

Things you need—implements and tools that should be on every truck garden and farm. Our way of making these specialties assures adaptability, strength and service at the minimum price for the best goods of their kind on the market.



"TRUE" Wagon Box and Rack

Without wings and ladder, it is a perfect wagon box. With them, it is the best Hay, Stock, Wood, Poultry, Corn or Fruit Rack ever invented. Adjusted to any position in a minute without wrench, hook or rope

"EureKa" Churn

Barrel of finest stoneware—top of clear pressed glass. Churns by hand lever. The only sanitary churn made. 3 sizes—8, 10 and 12 gallons.

"EureKa Root Cutter

will slice or shred from 1 to 2 bushels per minute. Fastest machine made—easiest running. Tapering cylinder—10 best steel knives.

"EureKa" Combination Anvil

Best iron anvil, with vice, pipe vice and drill attachment, and saw clamps. Just what you need for repairing tools and machinery. Weighs 60 pounds.

The "Bacon" Seed Drill

will handle the most delicate seed without bruising or breaking, and will sow evenly to the last seed.

Write for Catalogue

Every farmer, who wants to make money out of his farm, ought to have our new catalogue. It shows our TOOLS, Rakes Hoes and Machines as they are, and describes their construction in detail. Write for free copy.

The EureKa Planter Co., Ltd., Woodstock, Ont.

Agents Wanted!

We want agents to handle the Acme Steel Ladder. It is by far the best seller on the market today. You can, with horse and rig, make $5 00 to $10 00 a day by simply calling on property owners in your vicinity.

The Acme Steel Ladder affords protection from fire in a greater degree than any other ladder.

The Acme Steel Ladder is made and sold in one foot lengths. These can be fastened in such a way as to make a ladder of any length perfectly rigid.

They can be moved anywhere on the roof, either from the top or bottom of it.

Send for information regarding our sellling proposition.

The Acme Ladder is made in one foot links just the same as the old style ladder but with a very simple lock which is fully protected with patents. When the ladder is together the links are held rigid

If you are thinking of equipping your buildings with steel ladders and there is no agent in your locality and will write us we will have a man call on you.

The Acme Steel Ladder Co.,
SUSSEX, N. B.

FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N. B.

Do not delay potting all spring blooming bulbs you wish to force and plant at once all these classes of bulbs you intend to put in the open ground. If these bulbs are kept in the air much longer the crown is apt to gum and refuse to bloom.

Those who have room for forcing hardy plants for Easter should, before the ground freezes up, dig and pot Spireas, etc., and keep them cool and in darkness in a dry position until mid winter when they can be brought to heat and light.

Do not cover your out side beds of bulbs until the soil is frozen two inches deep over them. If your hardy shrubs have made a late sappy growth cut it back to sound ripe wood as such growth will surely winter kill and injure the plant. Look over your house plants see to the condition of the roots aud drainage, repotting any that need it or washing off the soil from root bound plants and repotting in same pot if more pot room cannot be afforded.

Such classes of plants as Palms, Dracinas, etc., are better repotted in spring and if in a root bound condition now, can be easily carried over the winter months by careful watering. Keep down red spider and green fly, which will now become active in warm close houses. Give your house plants all the air you can and such plants as can be treated with water give them a spray or wash them every sunny day.

B. B., of St. John, writes: Would you tell me how to grow Century Plant from a small partly rooted off spool. Will the removal of these little plants hurt an old one, if the roots are not disturbed? Is charcoal a good thing to mix with potting soil to make it light? Our soil is very heavy and soggy in the garden. How long should Hyacinths be kept in the dark? What will kill white cottony bugs that get on the under side of Azalea leaves?

Pot the small century plant in a small pot using a soil about half sand with good drainage, keep fairly moist and in a warm corner. The removal of small plants will not injure the parent plant, rather the opposite, if care be taken that the roots are not injured.

Charcoal makes an excellent thing and drainage will have a tendency to sweeten acid soil. Sand, however, is the best to lighten soil with. The Hyacinth should be brought from the dark when the sprout is about an inch or so high, they usually require from six to nine weeks to make their roots according to the temperature of cellars.

For the mealy bug spoken off kerosene, emulsion or whale oil soap is best, however, if there are only a few you can destroy them with lightly touching each insect with a camels hair brush dipped in alcohol. Be careful that no alcohol gets on the foilage.

Fern growers should try the new Scott Fern. It is a Hybrid from the Boston Fern, possessing all the strength of constitution of its parent. It grows much quicker and very dwarf and compact, making an excellent table fern, growing rapidly under the ordinary house conditions. Is is a most valuable jardinere fern and is being widely used for that purpose. It requires plenty of pot room and it quickly makes a fine specimen.

Twenty-five Cents is the Price of Peace.

The terrible itching and smarting, incident to certain skin diseases, is almost instantly allayed by applying Chamberlain's Salve. Price, 25 cents. For sale by all dealers.

The old, old story, told times without number, and repeated over and over again for the last 36 years, but it is always a welcome story to those in search of health—There is nothing in the world that cures coughs and colds as quickly as Chamberlain's Cough Remedy. Sold by all dealers.

The Price of the Edison Phonograph

An Edison Phonograph can be bought for your price whether it is $16.25 or a higher price up to $162.50, all playing both Amberol and Standard Records.

But you cannot measure the Phonograph by money. Whether the price is $16.50 or $162.50, it is not much to pay for an instrument that will last a lifetime, which will furnish you good music every day, which will furnish you better entertainment than you can buy in any other way, which will teach your children to love the best music, which will bring into your own home what other people pay large sums and go a long distance to hear.

Edison Standard Records . . . 40c
Edison Amberol Records (twice as long) 65c
Edison Grand Opera Records . . 85c

There are Edison dealers everywhere. Go to the nearest and hear the Edison Phonograph play both Edison Standard and Amberol Records. Get complete catalogs from your dealer or from us.

NATIONAL PHONOGRAPH COMPANY
100 Lakeside Ave., Orange, N. J., U. S. A.

WHAT THEY SAY:

W. W. BROWN,
Woodstock, N. B.

"I find I have been insured at LESS "COST, with PROMPT PAYMENTS OF "LOSSES, have had COURTEOUS "TREATMENT, and a SHARE IN THE "PROFITS of the association."

Did YOU get FIFTEEN PER CENT. DISCOUNT when you renewed your Fire Insurance?

Apply to
Atlantic Mutual Fire Insurance Association, Head Office **St. John, N. B.**

All Ready.

Yes, we are all ready with a Fall stock of Men's Footwear that deserves your attention, if you give any thought to matters of "correctness."

All the new creations in leather and shape that have been marked "approved" by those whose approval settles the styles.

Particular men will find here just what they want in Footwear. This is a Shoe Store that is especially conducted for particular people. The Laboring Man the Business Man, or the Swell Dresser will find that we give his particular shoe wants the most careful attention.

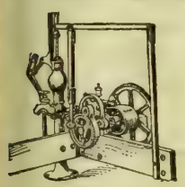
WM. TAYLOR & CO., Limited.
"Shoe Men."
156 Granville St., HALIFAX, N. S.

FOR OUT DOOR WORK
IN THE WETTEST WEATHER
NOTHING EQUALS

TOWER'S
TRADE MARK
FISH BRAND
WATERPROOF
OILED
GARMENTS
THEY LOOK WELL
WEAR WELL AND
WILL NOT LEAK
SOLD BY BEST
DEALERS EVERYWHERE
7
TOWER CANADIAN OILED CLOTHING CO. LTD. TORONTO. CAN.

A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.



Water Pumping, Gasoline Engine $55.00.
Free Circulars.
Guarantee Motor Co.
72 Bay St., North, Hamilton, Ont.

Don't Throw it Away
Does Your Granite Dish or Hot Water Bag Leak?
USE MENDETS
A PATENT PATCH

They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them; fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 25C., POSTPAID. Agents wanted.
Collette Mfg. Co., Dept. R. Collingwood, Ont.

LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble can be stopped with
ABSORBINE
Full directions in pamphlet with each bottle. $2.00 a bottle at dealers or delivered. Horse Book 9 D free.
ABSORBINE, JR., for mankind, $2 a bottle, removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins. Varicosities, Old Sores, Allays Pain.
W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

The Farmer of To-Day,

if he wishes to be abreast of the times, has got to know more than how to hoe corn and pitch hay.

He must be a business man, and he has little opportunity of learning business methods unless he spends a term or two at a school which makes a specialty of teaching business.

Fredericton Business College

provides the facilities. The principal is a farmer's son and knows something of the needs of the farmer.

A few dollars sown in this way will produce a bountiful harvest.

Send for catalogue. Address,

W. J. OSBORNE,
York Street, - FREDERICTON, N. B.

Are you a member of your local Agricultural Society?

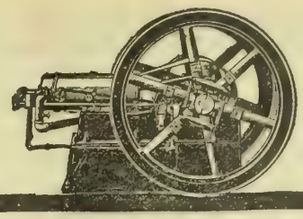
The PUBLISHER'S DESK.

TURKEYS.—A new and enlarged edition of the book Turkeys, their care and management has just been completed by the Reliable Poultry Journal Pub. Co. The new book has been revised to meet the standard requirements for Turkeys and anticipates the American Standard of Perfection which is to be published in 1910. An article on Score Card Judging with special charts by Franklane L. Swell is especially timely and will prove valuable to the turkey fancier in selecting winners for the winter exhibitions. Particularly valuable to the breeder for market are the articles telling how to condition the turkeys, when to sell, how to kill, dress and pack to bring the highest prices. Some of the other subjects dealt with in this new book are: How the Turkey got its name, Description of the Seven Standard varieties, The care of Breeding Stock, Mating the Breeders, Hatching the Eggs, Coops and Houses for Turkeys and Poults, Remedies for Poultry Diseases Well known breeders have contributed special articles on their favorite varieties including the Bronze, White Holland, Narragansett and Wild Turkeys, with special illustrations. In these they tell why they prefer the variety and how it is handled to secure best results. The book contains seventy-two illustrations, including a front piece in natural colors of a pair of Bronze Turkeys, by the world's greatest poultry artist, Franklane L. Sewell. Send us your order for a copy, price 75 cents postpaid, 96 pages, 9x12 inches. Address MARITIME FARMER, Sussex, N. B.

I. C. R. PICTURES PROVE POPULAR.—New York crowds see them with election returns. At one of the principal Bulletin Stations of the New York Herald on election night, the waiting thousands on the street, eager for the election returns, had also an opportunity of viewing some very beautiful pictures of the scenery along the line of the Intercolonial Railway. It is the custom at the Bulletin displays to entertain the crowd, during the period between bulletins, with a series of pleasing and instructive views, the New York Herald management never permitted anything in the nature of low comedy, or any direct advertising. On this occasion the operator decided on the Intercolonial pictures which had been gladly furnished at his request. Twenty-four views were flashed upon the screen, these being selected from every portion of the line. In a letter thanking the I. C. R. authorities for the use of the slides, the operator observes that the pictures proved most interesting, and were viewed by no less than 50,000 people. Several noted lecturers will use Intercolonial railway views to illustrate their lectures this winter, and the attractions of the "People's Railway" will thus be displayed to the audiences of a refined and cultured class.

Below is shown a cut of a house that was erected on the Iowa State Fair Grounds by the Chicago house Wreckinv Co. During the progress of the fair it was visited by thousands of persons who were surprised at the high grade material and general appearance of the design. This house is what is known as No. 117 in this Company's catalogue. It is 27 ft. in width by 36 ft. 6 inches in length, exclusive of porches Considering the fact that they furnish the material complete for the exact duplicate of this house for $550 00 it is certainly an astonishing proposition and a remarkable bargain offering'

It contains six rooms and bath, which are as follows: Living room, dining room, kitchen, pantry, three bed rooms and a bath room and is in every way a complete modern house on one floor. The fire-place in the corner of the living room adds cheerfulness to the surroundings. All the rooms are of easy access from the living room of the house. There are no waste spaces where not needed and the whole plan has been developed not only for convenience and beauty but in harmony with the general character of the bungalow pattern. For a summer or suburban home, this class of house offers many advantages not possible in designs of different construction, and they especially recommend this design to people of good taste and moderate means as an ideal home at a comparatively small cost. The Bungalow pattern of construction was at first employed only in houses intended for temporary use, but their beautiful outlines and great convenience soon brought them rapid favor as suburban and city homes. In this design they show one of the most pleasing examples of this deservedly popular style. The material they furnish is all brand new stock as described in their material specifications. They also furnish free plans, specifications and list of material for the construction of this design. They will furnish a complete Plumbing outfit for this house for $97.50 Paint for the entire job, including hard oil finish for interior, two coat work (including porch floor paint but no other floor or roof paint) $19.70. This building can be heated with furnace, steam or hot water as desired. The hot air furnrce they quote at $83.05. The steam heating plant would amount to $147 84. Or, if you prefer the hot water heating plant, which is by far the best it would cost you $176.21. The Chicago House Wrecking Co., 35th & Iron Sts., Chicago, Ill., will furnish the design for this house, together with brand new stock for use in erecting it for $550.00. More information that will interest builders of not only dwelling houses, but barns, etc., can be obtained absolutely free of charge, when writing them advise that you saw this design described in this publication. They advertise continually in this medium and a careful study of their "Ads" are confident will prove of interest to you.



GET AN I.H.C. GASOLINE ENGINE TO WORK FOR YOU

I. H. C. engines and prosperity are going hand-in-hand on thousands of farms. I. H. C. gasoline engines are the farmers' willing workers that do not ask for wages or days off or refuse to work when the weather is bad.

Just give the wheel a turn—and a whole string of your other machines will get busy. You can run half a dozen of them at once, if you like—sawing, grinding, churning, separating cream, pumping water, etc. Your simple, powerful I. H. C. gasoline engine will furnish power for them all.

One great advantage of these engines is their ever readiness. They enable you to do your hardest jobs faster, better and easier than ever you have been able to do them before.

There are hundreds of places where you would like to use a power—sometimes for just a little while, other times for a long, steady run. Many a time you can have the job done with your I. H. C. gasoline engine before you could even get ready with your old-style power. If it's a long, steady run, like a day's job of sawing wood, the engine will keep your saw going steadily hour after hour. The engine will take care of itself—all you have to do is to just 'saw wood.

The expense is only a few cents for gasoline for the whole day's work. There's no waste of time and fuel in starting up. And all expense stops the instant the work stops.

You need an I. H. C. engine to take the short cut on your work. Figure on the matter—see how soon it will pay for itself by getting full service for you out of your other machines. The engines are simple and easy to understand. You will have no trouble in learning to operate one of them.

Go to our local agent and look over the line. It includes an engine for every section and every problem; of all sizes and all costs, for all farm uses—vertical and horizontal (both stationary and portable); engines on skids; sawing, pumping and spraying outfits. It also includes I. H. C. gasoline tractors—first-prize-gold-medal winners—the best all-'round farm tractor by test.

Call on our local agent in your town and talk the matter over with him. He will supply you with catalogues and all information. Or, if you prefer, write nearest branch house for catalogue and full particulars.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
Chicago, U. S. A.

THE I-H-C LINE
LOOK FOR THE I. H. C. TRADE-MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY.

Piano News.

We know that other dealers have some good pianos. But we know, after long experience, that the lines that we control are the best as regards durability and fineness of quality and are pre-eminently the best in the market.

Why not come and see us or write us a line so that we may talk over piano purchasing?

Piano purchasing is made easy in this store as we have sold 15,000 pianos and or organs since we went into business. This means a lot.

The W. H. Johnson Co., Ltd.

157 Granville St, cor. Buckingham, HALIFAX,
also SYDNEY ST. JOHN, and NEW GLASGOW.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

SHORTHORN BULLS FOR SALE.—WALTER R. EATON, Upper Canard, Kings Co., N. S

SINGLE COMB BROWN LEGHORN COCKERELS—$1.00 each, ROCKWOOD POULTRY YARDS, St. John.

FOR SALE, CHEAP.—One two-horse treadpower, slightly used; as good as new. Write J. D. FRIER, Sussex, N. B.

WANTED.—A capable servant for general work; good wages. Apply MRS. H. GILBERT, Rothesay, N. B.

$15.00 buys a pure bred Holstein bull calf from a deep milking dam. S. B. HATHAWAY, Fredericton, N. B.

WANTED.—One yearling Shropshire ram, one Shropshire ram lamb and one Leicester ram lamb. Address WM. ROGERS, Bathurst Village, Gloucester Co N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

PRINTING.—Letterheads, $2.00 per thousand, up. Envelopes, $1.50 per thousand, up. Special facilities for stock breeders' supplies. Cash with order.—MARITIME PUBLISHING CO., Sussex, N. B.

SHROPSHIRES FOR SALE—Shearling rams, Rams and ewe lambs of the right type. Prize winners at Pictou among the lot. D. M. CAMERON, Elgin, Pictou Co., N. S.

FRAMERS,—We are buyers of dressed pork, poultry, fresh eggs and want prime quality goods. Small or large shipments. Prompt returns.—JOHN HOPKINS, St. John, N. B. Established 1867.

WANTED.—Married man, with some knowledge of poultry and incubators, to care for small flock of pure breds, also be able to care for horses and milch cows. House and vegetables supplied. Address, giving age and particulars, P. O. Box 331, St. John, N. B.

WANTED.—Persons to grow mushrooms for us during Fall and Winter months. Waste space in cellar, outhouse or barn can be made to yield $15 to $25 per week all Winter. Send for illustrated booklet and full particulars.—MONTREAL SUPPLY CO., Montreal

WANTED.—Poultry of all kinds to be exhibited at our January show. Send for free booklet, giving list of prizes and valuable information.—WESTMORLAND POULTRY & PET STOCK ASSOCIATION, Moncton, N. B.

SPRING PARK AYRSHIRES FOR SALE.—One two-year-old bull, imported in dam, two one-year-old bulls, and three September bull calves. All from deep milkers. Sire, Netherhall Gentleman Joe (Imp.)—SIMMONS BROS., Box 435, Charlottetown, P. E. I.

"Agents make BIG MONEY SELLING "VOL-PEEK" Granite Cement. Mends holes in Graniteware, Iron, Agate, Tinware, etc. Mends a hole in 1 minute. Every housewife buys. Greatest seller on the market. Agents make over 100 p. c. profits.—V. NAGLE, WESTMOUNT, QUE.

FOR SALE—Fine breeding pen, S. C. B. Leghorns, ten birds, only ten dollars, Pure bred W. Wyandotte eggs, per setting 75 cents. W. Pekin and Cayuga duck eggs, $2.00 per eleven Newly hatched chicks 15 cents each, 50 egg Incubator, good as new, only $4.00. J. W. Hughes, Firgrove Bellisle Creek Kinds Co N. B.

BAVIS' bred to lay White Plymouth Rocks won at the Fredericton Exhibition first cock, first cockerel, first pullet, first young pen, first adult pen in utility class, special for best White Rock male. If you want the kind that win as well as lay, write me. A few magnificent Single Comb White Leghorn Cockerels, $1 00 each. If stock is not satisfactory I refund your money and pay all expressage —B. BAVIS, Cross Creek, N. B

WANTED,—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W A. JENKINS' MFG., CO., London, Ont.

Notice to Guernsey Breeders.

The annual meeting of the Canadian Guernsey Breeders' Association will be held in the Board Room of the Winter Fair Building Amherst, N. S., on Wednesday afternoon, Dec. 8th, at 2 o'clock.

H. W. CORNING, Secretary.
DANIEL G. McKAY, President.

Spring Brook Farm Ayrshires.

For Sale—"Star of Spring Brook Farm.'

Two years old February next; a fine young bull, which was first at Sussex, Fredericton and Halifax, 1909, also a few young Bull Calves and Heifers.

McIntyre Bros., Sussex, N. B.

Meadow Brook Farm

SHROPSHIRES !

We have a few Shearling Ewes and Ewe Lambs and several pairs of Aged Ewes (ages from 3 to 5) for sale, in addition to the balance of our Ram Lambs.

ANDREW McPHERSON,
Rocklin, N. S.

FOR SALE !

Ayrshire Stock Bull of St. Anne breeding for sale, also one 12 and another 16 months, from well bred cows.

Taylor Brothers, Antigonish,
"Willowdale Farm," Nova Scotia.

SPECIAL SALE !

To prevent overcrowding we quote the following prices on all our high-class Poultry. White Rocks and S. C. R. I. Reds, Hens or Pullets, $5.00 for six; six Reds and good Cockerel, $6.00; Single Cockerels, $2.00 to $5 00; some excellent Red Cockerels of Tompkins' Strain, Red to the skin, Tompkins' $25.00 quality for $5.00; no better stock to be had in Eastern Canada.

The Burley Poultry Company,
46 Princess Street, - ST. JOHN, N B.

Jersey Bull For Sale.

I have a pure bred Jersey bull 2 years old for sale, which was first at Sussex, Fredericton and Halifax this year. Write for price, etc.

ROBERT ROBINSON,
Sussex, N. B.

Springvale Farm.

Ayrshire Cattle and Oxford Down Sheep, Young Rams, also a few breeding ewes of different ages can be spared.

FRED S. BLACK,
Springvale Farm, Amherst, N. S.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

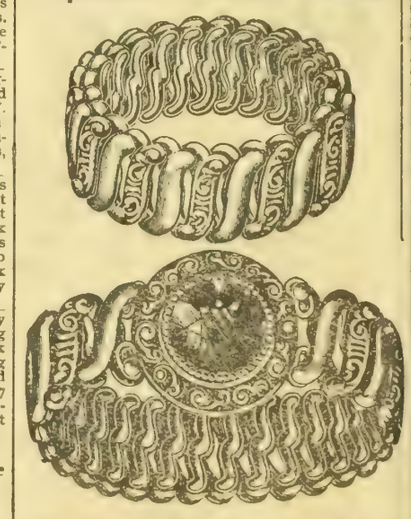
We are offering yearling bulls in Guernseys and Jerseys, also females, all ages.

Exhibition fowls and chicks from our Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Brown Leghorns and S. C. Rhode Island Reds.

Winners for the Autumn fairs.

WALTER McMONAGLE & SONS,
Long Distance 'Phone Sussex, N B.

A Splendid Christmas Present.



A Ladies Gold Filled Expansion Bracelet, fully guaranteed. They come in Chased and Plain Case; Amethyst set. Having bought a large assortment of these, we will offer, while they last, at the following prices :

Plain, in nice box, only.....$1 58
Amethyst.....$1 98

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GEO. SUFFREN, - Sussex, N. B.

68 Clydesdales

Will be Sold

At AUCTION

— AT —

ST. JOHN, N.B.

Beginning at 10.30 a. m.

Tues., 14th Dec.

This direct importation from Scotland is arriving ex Donaldson Steamer Cassandra about 1st December and includes sixty-five mares and three stallions, all registered in the Clydesdale Stud Book of Canada and all young, large, smooth individuals of the best Scotch breeding. They may be inspected at the stables of A. C. Smith & Co., West St. John, any time after landing.

On all animals bought to remain in New Brunswick **The Department of Agriculture** will pay the freight from St. John to the purchaser's station.

Terms of Sale Cash, or notes acceptable at St. John Banks.

No restrictions as to residence of purchaser or re sale of animals, except that purchaser asking the Department to pay freight will undertake to retain the animal in question for breeding purposes within the Province for Five Years.

Return trip to sale **for single fare** upon the Standard Certificate plan. Good going on the 11th and 13th December, returning on the 14th, 15th and 16th December, over Intercolonial and Canadian Pacific Railways, (buy one way first-class ticket for St. John and secure Standard Certificate from Ticket Agent. Have certificate filled in at the sale and signed by Secretary, present it to Ticket Agent at St. John Station and it will be exchanged for a ticket to original starting point free.) Certificates will not be accepted for passage on trains.

The sale will be held under cover and seating accommodation, giving unobstructed view of sales ring provided. Settlement must be made before leaving sales building or animal will be resold.

WM. MEHAREY,
Importer.
W. W. HUBBARD,
For Department of Agriculture.

F. L. POTTS,
Auctioneer.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., December 21, 1909. Number 6.

The Ninth Annual Maritime Winter Fair.

USHERED in by mild, balmy weather the ninth annual Maritime Winter Fair opened its doors to the general public on Monday morning, December 6th. The experience of the previous years showed the management that in order to accommodate the ever increasing number of entries in the respective classes, more space must be provided, so during the early part of the year they succeeded in inducing the thriving town of Amherst to make extensions and improvements to the old building. An addition of eighty feet has been made to the old building which makes the total length three hundred and fifty feet with a width of one hundred and thirty feet. This additional space, with the new cattle shed at the side one hundred and thirty feet long by thirty-two feet wide, gives ample room to show every department to the best advantage. The front, which is mainly of glass gives a much better appearance from the outside and greatly increases the light inside. This, with an addition of eight large skylights in the roof adds greatly to the light during the day, while the Electric Light Co. have installed a most efficient lighting system. New and more convenient offices have been installed and separate rooms provided for special demonstrations so that those not interested in any one department may remain in the auditorium while the demonstrations, which formerly had been made on the main floor are going on. The large ventilation shaft which occupied the main floor up stairs has been removed, giving much more space and light and an unobstructed view in the poultry department while a separate room for the seed display which hitherto has been greatly cramped, has been provided. Honey exhibitors, too, have a space to themselves, while the dressed poultry department is exceptionally convenient. The fruit room is also much improved and the fruit can be much better looked after than in the past. A large room has been set aside up stairs at the front of the building for the use of the various associations affiliated with the Winter Fair and which plan to hold their conventions during the Fair season. The Commissioners have spared neither pains nor expense in their preparations for the comfort of both exhibitors and visitors and it is gratifying to note that they had both classes in such an abundance as would lead one to suppose that in the near future further additions and extensions must be made.

THE FORMAL OPENING.

For several months the citizens of the Maritime Provinces had been talking about the coming Winter Fair, it was seemingly a foregone conclusion with everybody that the fair was going to be the best in its history, "they felt it in thoir bones," as it were, and towards Amherst all roads led on December 6th. The fact that His Excellency Earl Grey was to be the guest of honor and would formally declare the fair open was of itself a great attraction to people who wished to honor His Majasty's representative and also Lieutenant Governor Fraser of Nova Scotia and Lieutenant Governor McKinnon of Prince Edward Island. Lieutenant Governor Tweedie of New Brunswick was unavaidably absent. After the Stock Breeder's banquet which took place in the handsomely decorated dinning room between the hours of 6 and 8 p. m. Monday evening and which was catered to by the ladies of the Hospital Aid Society of Amherst, Mr. E. B. Elderkin, President of the Maritime Stock Breeder's Association took the chair in the large auditorium where upwards of 3000 visitors had gathered to listen to the speakers. On the platform with President Elderkin were theiGovernors already referred to Hon. Sidney Fisher, Minister for Agriculture and other prominent gentlemens. Mr. Elderkin outlined the progress of the fair since its organization in 1901. He was pleased that the minister for agriculture who had said "go on and my department will assist with the funds" was present to see what the nine year old child had accomplished. He was pleased to see such a large audience and thanked all present for their attention.

Mayor Lowther of Amherst, who is suffering from a broken arm, was present and said he would not miss being present even if both his arms were broken. He spoke of the additions to the fair building, which involved an outlay of about $7000. He was glad to see the building so well filled and invited all strangers to visit the Amherst industries.

Warden Pipes of Cumberland in a short but appropriate address welcomed visitors to the county of Cumberland.

Dr. D. V. Landry, Commissioner of Agricultural for new Brunswick was he next speaker. He was pleased to see the chief men of our country taking so much interest in the class he was proud to represent. It was an encouragement for the farmers to have the hearty co-operation of such people as visited the Winter Fair. Present conditions in agriculture pointed to a bright and prosperous future. He spoke very highly of the quality of the exhibits in the various classes. The poultry business was making such strides of progress in New Brunswick that his department had decided to appoint an expert to still further the industry by timely advice and instruction.

The exhibit of New Brunswick fruit was a revelation to a great many visitors to the fair and he trnsted the future would see some active advancement along the fruit growing line. He would like to see a well equipped experimental farm in his province, where farmers could see the most modern methods of performing agricultural operations practised. He concluded by conveying to His Excellency Earl Grey, the statement that among the many races of people in Canada there are none more loyal to King Edward and his causes than the race from which he himself had descended, the French.

Telegrams from Sir Wilfred Laurier, Hon. Wm. Pugsley and others were read expressing their regret at not being able to be present at the formal opening of the fair.

His Excellency Earl Grey appreciated the hearty manner in which he had been received. The interest taken in the fair was an evidence to him that the people of the Maritime Provinces are anxious to better their agricultural position There was no class that had his warmest sympathy in their work than the agricultural class. He advocated more attention to "the God made country and less to the man made town" so that country life will have so much added to its charms that "back to the farm" will be the watchward of the surplus population in our cities and thus help to solve one of the greatest problems of modern statemanship, viz. to make farm life so pleasant and profitable that the present exodus of our young men citywards will cease. The ratio between producers and consumers is rapidly decreasing and the state must eventually sole the amelioration of those conditions. He anticipated a pleasant visit to the Agricultural College at Truro and spoke of the benefits accurring from the teaching of nature study in our schools. The two wings that are destined to bring the present age to higher plane are education and association. He had noticed that the Agricultural Communities of the world were the most prosperous and in conclusion he urged for more individual energy and co-operative union.

Hon. Sidney Fisher, Minister of Agriculture was pleased to note that during his regine the people were getting together for the advancement of their agricultural interests. He thanked His Excellency Earl Grey for his interest in matters agricultural and in economic social conditions. He referred to our King's interest in Agriculture and was pleased that his representative in Canada, England's greatest dominion, was interested in the agricultural development of the country.

As Minister for Agriculture he had watched the development of Canada from balmy Pacific stopes to the shores of the Atlantic. "There is" said he "an East as great as the West and it is growing apace." There was nothing more conspucious in the upbuilding of the West than our eastern boys who are always leading in every walk of life. We are therefore one homegenous mass and the East must help the West on to its fruitition. While the West is increasing in wealth the East is also increasing in prosperity.

The drift from country to city or town was one of the most acute problems of the day. The East was progressing along industrial lines and our ports are increasing owing to the productiveness of the west. Conditions in the East were not conductive to wholesale farming but ample room is provided here for more intensive farming. The export of our products is decreasing rapidly owing to increased home consumption. The cry of the city consumer is that the producer's prices are too high but he hoped to see them go higher still until the only remedy for the city deweller will be to leave the town and go back to the country, grow the respective commodities and thereby cease their grumbling. The Minister's closing remarks urged for patriotism to our respective provinces.

His Honor D. L. McKinnon, Lieutenant Governor for Prince Edward Island paid a fitting tribute to prominent citizens who were wont to take an active part

in Winter Fair matters and who had been called to rest from their labors. He would like to see more industrial development in our respective cities so that our producers could have better markets for their goods. He proved by statistics that the interest that is being taken in agriculture is proving beneficial to our farmers and all concerned and that we are fast forging ahead. He spoke of the ample room for further development. He expressed appreciation of the good work that is being done at the Truro Agricultural College and concluded his address by quoting a patriotic ditty from Burns.

His Honor Lieutenant Governor Fraser of Nova Scotia, referred to agriculture as the foundation of all wealth, and made the statement that not more than ten percent of arrable Canada had yet been tilled. Canada could never suffer so long as sixty percent of her citizens remain on the farm. The farmer is Canada's truest citizen, because he works for himself and others. The whole of our country is bound up in agriculture. As a rule, farmers do not clamour for their rights as other classes do. He was satisfied that more of our young men were now settling down on our farms, by the fact that he had signed more marriage certificates during his term of office than any two of his predecessors. He referred to the thrift of Scotch and North of England farmers. He had visited both Scotland and England and one of the most prominent features he had noticed in rural districts, was that early or late the plowman could be seen at work in the fields. He concluded his address by saying, "hand your farm down to your son or successor better than you received it from your fathers."

The programme for the other evening meetings was as follows :

Tuesday evening, Chairman, Col. H. Montgomery-Campbell, Vice President for New Brunswick.

Address by Mr. E. D. Eddy, Seed Dept., Ottawa, subject: "Field Crops."

Address by Mr. Duncan Anderson, Ottawa, Ont., subject: "Beef Products."

Address by Hon. Sydney Fisher.

Wednesday evening, Chairman, Mr. C. A. Archibald, Vice President for Nova Scotia.

Address by Mr. John Campbell, Woodville, Ont., on "Sheep the Farmer's best Friend.

Address by C. M. McRae, Ottawa, on "Why Farmers Should Raise Hogs."

Address by W. F. Stevens, Huntingdon, Quebec, on "The Relation of the Dairy Industry to Maritime Agriculture."

Thursday evening, Chairman, Mr. E. B. Elderkin.

Address by D. V. Standish on "The Necessities and Advantages of Producing Agricultural Horses."

An address on "Bees a Necessity to Plant Life" by Mr. J. E. Stocker, Oromocto, N. B.

The presentation of prizes by Mr. Hans Logan of Amherst. After which the Ninth Annual Maritime Winter Fair was closed by "Singing God Save the King."

Extracts from the various address will be given in future issues.

THE JUDGES.

We have yet to visit a fair where there was more general satisfaction in regard to the judges' awards than was evidenced at Amherst.

Following is a list of the judges:

Beef—Mr. Duncan Anderson, Ottawa.

Sheep—Mr. John Campbell, Woodville, Ont.

Swine—C. M. McRae, Ottawa.

Poultry—Mr. E. C Elford, McDonald College, Que. and Mr. A. C. Smith, Waltham, Mass.

Seed—Mr. L. H. Newman, Ottawa and Mr. E. D. Eddy, Ottawa.

Fruit—Mr. R. W. Starr, Wolfville, N. S.

Apiariyan products—J. E. Stocker, Oromocto, N. B

Milking contest—Mr. Harvey Mitchell.

Dressed carcasses—Mr. Duncan Anderson and Mr. John Campbell.

THE BEEF CLASSES.

There were 130 entries in the various sections of the beef classes. The stock was out in excellent show condition. Mr. C. A. Archibald and his competent herdsman, Mr. Douglas Bridges, were over from Truro with some of Bellevue Farm's best Shorthorns and made a most creditable showing. Every animal shown by Mr. Archibald was bred on his farm at Truro. Other exhibitors in the pure bred Shorthorn classes were: Harold Etter, Westmorland Point, N. B.; Edwin Forrest, Amherst, Point, N. S.; Geo. M. Holmes, Amherst, N. S; Cecil T. Coates, Nappan, N. S.; Hazen Etter, Westmorland Point; Chas. W. Forrest, Amherst Point; Samuel C. Lane, Pownal, P. E. I.; Donald Freeman, Amherst; Laurie M. Anderson, Sackville, N. B.; J. McCully Pipes, Nappan, N. S. and Demont Freeman, Amherst.

W. W. Black was on hand with everything shown in the Hereford class. His herdman, Mr. Wm. Robertson, as usual had the stock in the pink of condition and the broad level backs of the sleek looking white faces were much admired and formed a pleasing attraction in the beef stalls.

In the class for grades of any breed, Shorthorns predominated. Laurie M. Anderson, W. W. Black, Chas. W. Forrest, Amos Fowler, Amherst Point; C W. Pugsley, Barronsfield, N. S.; Albert Anderson, Sackville; Hazen Etter, Chas. W. Forrest, Edwin Forrest, Cecil T. Coates, Thos. J. Etter, Westmorland Point; Amos Patterson, Sackville and Courtney Lusby, Amherst were the principal exhibitors.

Laurie M. Anderson, W. W. Black, Thos. J. Etter, Chas. W. Forrest, Amos Fowler and Edwin Forrest had entries in the dressed beef contest.

Number of entries in the various sections of the Shorthorn class were as follows:

4 steers, 2 years old and under 3 years.

4 steers, 18 months and under 2 years.

2 steers, 1 year and under 18 months.

3 steers, 6 months and under 1 year.

4 steers, under 6 months.

5 cows, or heifers 3 years old and over.

7 heifers, 2 years old and under 3 years.

3 heifers, 18 months old and under 2 years.

7 heifers, 1 year old and under 18 months.

6 heifers, under 1 year old.

There were 10 entries in the Sweepstakes class for best animal any age, but the coveted prize went to Merry Maid V, a junior yearling heifer shown by Mr. C. A. Archibald. The special prize offered by the Terrace Hotel, Amherst, for best Shorthorn female, any age, was also captured by Merry Maid V, which was also the champion last year as a calf. Further honors were also crowned on Merry Maid when she carried off a valuable silver cup donated by Mr. M. J. O'Brien, Railway Contractor, Montreal.

HEREFORDS—All the prizes in this class were won by W. W. Black who had from one to three entries in each class. The Sweepstakes prize went to George, the winner of the first prize in the two years old steer class. George also carried off the Silver cup donated by Sir Frederick Borden, Minister of Militia, for the best pure bred beef animal, any age. This cup was also won last year by Mr. Black and in 1907 by Mr. R. S. Starr, Port Williams, N. S. The Giles cup for the best beef animal under two years was also won by W. W. Black for the third time, having won it previously in 1904 and 1905. This cup now becomes the property of Mr. Black as he has captured it a third time.

GRADES OF ANY BREED.—In this class there were 6 steers and 7 cows, 3 years old and upwards; 6 steers and 6 heifers, 2 years old and under 3 years; 6 steers and 6 heifers, 18 months and under 2 years; 6 steers and 5 heifers, 1 year and under 18 months; 5 steers, 6 months and under 1 year; 5 steers, under 6 months, and 6 heifers, under 1 year.

The Hon. Wm. Pugsley's (Minister of Public Work) silver cup for best grade beef animal, any age, which was won in 1907 and 1908 by Mr. W. W. Black, went to Wm. Fowler this year on a two-year-old grade Shorthorn.

48 HOURS' DAIRY TEST.

The new dairy stables are a decided improvement over the old ones, but a proper system of ventilation is badly needed. Much interest was evidenced in the milk test by the general public. A tabulated record of the 48 hours' milking test will be found on another page.

The grand championship cup, donated by Henry Birks & Sons, Ltd., Montreal, for the highest scoring cow in the dairy test, of any breed or grade, went to one of Logan Bros.' Holsteins.

SHEEP.

There were 178 entries in the sheep classes and each and every breeder had come forward with his best.

Leicesters were shown by Albert Boswell, Pownal, P. E. I., and Samuel C. Lane, Pownal.

Albert Boswell, Jr., French Fort, P. E. I., and Charles Symes, Minudie, N. S., were the only exhibitors in the Lincoln classes.

H. B. Parlee, Sussex, N. B., had everything his own way in the Cotswold class.

Charles Symes was the only exhibitor of Cheviots.

There was a strong competition in the Southdown classes with Jas. E. Baker & Sons, Cephas Nunn and Oliver C. Saunders in the ring.

George Boswell, Logan Bros., Cephas Nunn and Jas. I. Stewart were out in battle array with excellent Shropshires. The prize list tells the winners' tale.

J. E. Baker & Sons, Burder Goodwin and A. H. Boswell were out with as good a lot of Oxfords as can be found anywhere.

Cephas Nunn had an excellent lot of Hampshires and no competition.

Albert Boswell, Jr., met no competition in the Suffolk class.

There was a large number of entries in the class for grades and crosses.

Geo. Boswell, Logan Bros., Samuel C. Lane, Cephas Nunn, Jas. I. Stewart, Oliver C. Saunders, Albert Boswell, Jr., and Burder Goodwin were on hand to match the merits of their respective animals

The grand championship silver cup, donated by Senator Mitchell, Montreal, for the best pen, including one ewe lamb, one yearling ewe and one ewe, two-year-old, having been won in 1907 and in 1908 and again this year by Logan Bros. becomes their permanent property and retires from future competition. The Boswell Leicesters gave the Logan Shrops a chase for this valuable trophy.

Twenty sheep were but entered for the block test.

SWINE.

The various swine classes were well filled with carefully fitted stock. Yorkshires were shown by W. H. Pope Cook, Wm. Holmes, A. A. McBeath, Albert Anderson and Roper Bros.

Tamworths had W. J. Gibson and Roper Bros. as their Champions

In the Berkshire class, Peter Brodie had the largest number of entries, J. R. Semple, James I. Stewart, Wm. J. Gibson, Wm. Holmes and Geo. G. Lowther, were the other exhibitors.

Chester Whites and Poland Chinas shown the former by Leonard Court. "W. H. Pope Cook and A. H. Boswell and the latter by Chas. Symes, competed in the class for" any other pure breed. It would not be amiss to have a special class for Chester Whites as they are rapidly gaining in popularity.

There was a large number of entries in the class for grades and crosses.

The grand championship silver cup donated by J. E. Wood, Esq., Halifax, N. S., for the pen of three, including sow under 6 months, sow 6 months and under 1 year and sow over 1 year, which was won in 1908 by Roper Bros., was captured by Peter Brodie who held it in 1907. Mr. Brodie is planning to come back next year and claim it as his permanent property. Forty-five hogs were butchered for the dressed carcass competition.

APIARY PRODUCTS.

A very creditable display of Apiary products was made. The quality was high grade and showed expert knowledge in the handling of the bees. The flavor was all that could be desired. Judge Stocker said the comb honey would stand competition at any of our larger shows and expressed great satisfaction with the whole exhibit.

THE SEED EXHIBIT.

The exhibit of seeds, seed grain and potatoes would be a credit to any show in Canada. Although a special room was provided in the new portion of the building, it proved scarcely large enough to accommodate the splendid turnout of seeds from all parts of the Maritime Provinces.

The Canadian Seed Growers' Association put up a very handsome show of grain, both in the straw and threshed. Mr. E. D. Eddy, who judged the grain, remarking that he had never judged a better quality anywhere in Canada. The demand for seed, produced by members of this Association, is steadily growing and their exhibit shows that the work is steadily gaining in favor and proves the efficiency of their methods.

The veteran, Donald Innis, was wearing "the smile that won't come off," for he won the Steele Briggs' cup for the third time. It is seldom that one person is able to take all the first prizes offered, but that is what Mr. Innis did in the group exhibits, shown by the Canadian Seed Growers' Association. He won with White Fife wheat and Early Blossom oats of the ninth year's selection and Mensury barley and White Marrowfat peas of the second year's selection.

Mr. Robert MacKay, of Millsville, N. S., showed very nice group exhibits of White Marrowfat peas, Mensury barley, Manitoba oats and Red Fife wheat of the first, third, ninth and tenth years' selection, respectively.

Richard Creed, Albion, P. E. I., was present again with White Russian wheat, Mensury barley and White Egyptian oats, the product of from three to ten years' continuous selection.

T. J. Wiggington, the next largest exhibitor, showed White Egyptian oats, Mensury barley and White Russian wheat of from one to nine years' selecting.

The following exhibitors showed sheaves and samples of good quality :

R. D. MacKay, Balmoral Mills, N. S., Red Fife wheat.

Wm. E. Palmer, Scotch Lake, N. B., Banner oats, ninth year selection.

Gordon MacMillian, Cornwall, P. E. I., White Fife wheat, selected nine years.

Wm. H. Moore, Scotch Lake, N. B., Red Fife wheat.

Wm. O. Wright, Dalhousie East, N. S., American Beauty oats, third year selection.

E. E. Arsenault, Urbanville, P. E. I., White Russian wheat and Old Island Black oats.

Harry R. Brown, Wallace Bay, N. S., Banner oats, seventh year selection.

Exhibitors of sheaves of grain with fine representive plants were :

Wm. E. Palmer, Scotch Lake, Red Fife wheat.

H. R. Brown, Wallace Bay, Regenerated Abundance oats.

R. Creed, Albion, Twentieth Century oats.

The following showed selected potatoes from breeding plots :

H. R. Brown, Green Mountain; R. Creed, Early Harvest; R. MacKay, Beauty of Hebron.

An interesting exhibit was made in the beginner's class by Mr. C. Fred Fawcett, Upper Sackville, N. B., who is commencing the selection of Green Mountain potatoes, and placed on exhibition the product of three individual hills, consisting of thirteen, nine and eight marketable tubers each.

The competition for the gold medal, presented to the boys and girls of New Brunswick by Dr. Jas. W. Robertson, made a very nice showing. The contestants were :

James R. Moran, Doaktown; Pearl Patterson, Sussex; James Phillips, Up-

per Kintore; Arthur Moore, Scotch Lake; Nettie Moore, Scotch Lake, and Guy Patterson.

The medal for hand selected wheat went to Miss Nettie Moore and a similar prize for best sheaf of oats went to Miss Pearl Patterson.

In the general class a very fine showing was made and a decided improvement over last year was apparent throughout.

While there was not as large an entry of potatoes as last year, both quality and selection were better.

Rumor has it that several special prizes will be offered next year in the seed classes. If this should be the case there should be even a larger and better showing than there was this year. Get busy boys.

The various departments of the fair were efficiently surperintended. Exhibitors were satisfied and visitors were delighted and many expressions approving of Mr. Fuller's effeciency was heard on every hand.

The fair is over and will go down in history as one of the most educative fairs ever held in Eastern Canada.

REPORT OF FRUIT JUDGES AT WINTER FAIR.

MR. PRESIDENT AND GENTLEMEN OF THE COMMISSION:—

I found a large, and for the most part, a very fine exhibit of apples from each of the Maritime Provinces. Some of the exhibits from what may be called the non-fruit producing counties had, for their credit, better been kept at home as they only served to accentuate the difference between good fruit and that which is comparatively worthless. I must say, however, that had those exhibitors known more of the proper methods of selecting specimens and chosen them direct from the trees, then carefully storing them, in cool cellars until wanted, they could have made a much better showing.

Commencing at the south end of the table with the Nova Scotia collections, Hants, Kings and Annapolis each had two collections of what are recognized as known commercial or standard varieties, well grown, well colored, and well selected.

PICTOU showed three collections of handsomely grown apples, mostly of which are well known standard varieties and a credit to the county.

CUMBERLAND showed three collections of really well grown fruit. Some of the specimens did not show the best of care in handling and some of the varieties were mis-named showing that nomenclature has not been made a study by the growers.

QUEENS had one very good collection of correctly named sorts six of which are standards, the others good, well-known winter varieties.

COLCHESTER showed three collections each having six standard sorts, the others are new or not well-known varieties but seem to be fairly good.

ANTIGONISH had one collection. I am sorry to say it was not a good show. I have seen much better fruit shown from that County.

HALIFAX had two good collections of bright, well-selected fruit, not as large as the same varieties from the Valley County, but clean and well colored.

PRINCE EDWARD ISLAND.

QUEENS COUNTY sent three collections of correctly named, carefully handled fruit.

PRINCE COUNTY had two collections equally good, perhaps better.

KINGS with two collectione following very closely in a race for the first place on the Island.

NEW BRUNSWICK made an extraordinary effort this year and showed collections from eleven of her fifteen counties. The Provincial Government added two prizes of $3.00 and $2.00 to each of the Commissioners County prizes of $6.00 and $4.00, making four prizes as in inducement to their farmers to compete, and this has been successful in bringing out some 24 collections beside a large general collection made by the Government to show the capabilities of the Province for fruit growing.

ALBERT showed three collections of good, well grown fruit, but required more care in selection and handling.

KINGS showed four collections of well grown, fairly well selected and mostly correctly named sorts.

SUNBURY had two very good, correctly named, carefully handled, well selected collections of well known varieties.

QUEENS showed five collections of very good fruit generally correctly named, well selected specimens and fairly well handled.

WESTMORLAND had two collections. One was well grown, correctly named, and selected and well handled. The other was correctly named but did not show as much care and skill in selection and handling.

YORK had only one collection but it was very good, well grown, correctly named, well selected and carefully handled.

GLOUCESTER showed one, passably well grown collection, but showed careless handling and selection.

CHARLOTTE showed one collection, a little better grown and selected than that shown last year.

RESTIGOUCHE had two collections. Fruit quite inferior, not correctly named, Famuese duplicated as Baldwin. Try and do better next year.

ST. JOHN had two collections of small, poorly grown, carelessly selected and handled fruit.

VICTORIA had one collection of only fair fruit, not as good as that shown last year.

The growers of apples in the Counties of Gloucester and Charlotte, Restigouche, St. John and Victoria in New Brunswick and Antigonish in Nova Scotia, should be more careful in the selection and care of the fruit which they exhibit, if they wish to advance fruit growing in their different localities. Many of the other Counties are advancing rapidly and if we may judge by the fruit shown at these exhibitions, they are capable of supplying their local markets and may soon have samples for export.

R. W. STARR,
Judge.

The Clydesdale Auction Sale.

The auction sale of Clydesdale mares, imported recently from Scotland by Wm. Meharey, Russel, Ontario, was held as advertised in these columns on December 14th, at West St. John. A good, useful lot of fillies was offered. The attendance was very large and comprised farmers and others from all parts of the Maritime Provinces. Following is a list of the mares sold, the purchase price and purchaser's name :

Lady Hodgson, Can. No. 20034, $370.00; Sheriff O'Brien, Nothumberland Co., N. B.

Darling of Wetheriggs, Can. No. 20018, $235.00; James A. Gallop, Victoria Co., N. B.

Dollar Princess, Can. No. 20017, $265.00; Chas. deMerchant, Perth, N.B.

Countess of Cree, Can. No. 20020, $265.00; Richard, Patterson, Sussex, N. B.

Mollio, Can. No. 20107, $305.00; J. W. S. Black, Sackville, N. B.

Jeanie Wallace, Can. No. 20012, $265.-00; John M. Hopper, Woodstock, N. B.

N. Igella, Can. No. 20040, $300.00; McLaggan Bros., Blackville, N. B.

Jenny Johnstone, Can. No. 20096, $305.00; Wm. N. Johnson, Nelson, N. B.

Cowie Darling, Can. No. 20019, $275.-00; George Maddox, Florenceville, N. B.

Bessie Weir, Can. No. 20022, $300.00; R. W. Menzie, Springfield, N. B.

Auchentroig Jean, Can. No. 20027, $255.00; Elias Daigle, Edmunston, N. B.

Patrician Maid, Can. No. 20041, $245.-00; Geo. Eccles, Westfield, N. B.

Jess of the Guards, Can. No. 20097, $335.00; D. W. Pickett, Andover, N. B.

Cherry Blossom, Can. No. 20092, J. T. Prescott, Sussex, N. B.

Trim of Bampton, Can. No. 20114, $240.00; W. H. Moore, Scotch Lake, N. B.

Attractive Baroness, Can. No. 20028, $240.00; Thos. Harrahan, Woodstock, N. B.

Lady Thornton, Can. No. 20036, $355.-00; Mr. Pickett, Andover, N. B.

Miss Minto, Can. No. 20038, $280.00; J. Sutton Clark, St. George, N. B.

Lady Ann Carleton, Can. No. 20119, $285.00; John M.Keith, Havelock, N. B.

Baroness de Gay, Can. No. 20025, $365.00; Mrs. C. E. Rigby, Hartland, Carleton Co., N. B.

Lady Belle Mitchell, Can. No. 20031, $290.00; O. M. Melanson, Shediac, N. B.

Bardess, Can. No. 20026, $225.00; G. C. Murray, Fredericton, N. B.

Poetess, Can. No. 20042, $255.00; Austen Broom, Annagance, N. B.

Lady Sensation, Can. No. 20035, $245.-00; J. C. Bishop, Harvey Bank, N. B.

Johann Donnan, Can. No. 20098, $275.-00; Sedge Armstrong, Honeydale, N. B.

Nellie of Mosshead, Can. No. 20109, $295.00; J. K. Pinder, Millville, N. B.

Ellen Irving, Can. No. 20015, $335.00; J. A. Irving, Buctouche, N. B.

Beryl Craigie, Can. No. 20024, $295.-00; Chas. Peters, Elmhurst, N. B.

Lady Aeronaut, Can. No. 20029, $365.-00; C. H. Beardslen, Berwick, N. S.

Lady Aviator, Can. No. 20030, $285.-00; H. W. Brownell, Amherst, N. S.

Jenny Barbour, Can. No. 20011, $220.-00; Blake Clark, Cambridge, N. B.

Miss Blacon, Can. No. 20106, $275.00; Jas. A. Gallop, Victoria, N. B.

Jean Blacon, Can. No. 20014, $275.00; Geo. A. Chapell, Westmorland Co., N. B.

Norah's Pride, Can, No. 20110, $305.-00; Edward Keys, St. Stephen, N. B.

Mary Finnie, Can. No. 20104, $255.00; H. C. Masters, Berwick, N. S.

Nancy Mitchell, Can. No. 20108, $290.-00; H. C. Masters, Berwick, N. S.

Eva Ronald, Can. No. 20096, $255.00; David Barber, Harvey, N. B.

Bessie Ralston, Can. No. 20023, $265.-00; Edward Keys, St. Stephen, N. B.

Wilhelmina, Can. No. 20116, $180.00; Thos. Davis, Keohan, N. B.

Virgin Metal, Can. No. 20115, $320.00; A. S. Maxwell, Richmond, Me.

Blossom's Pride, Can. No. 20021, $250.00; Sege Armstrong, Honeydale, N. B.

Maggie Morrison, Can. No. 20103, $305; Norman P. McLeod, St. John West, N. B.

Lady Leslie, Can. No. 20100, $175.00; H. W. Smith, Canterbury, N. B.

Jean Hunter, 2nd, Can. No. 20013, $250.00; S. C. Hayward, Port Elgin, N. B.

Milton Quality, Can. No. 20105, $250.-00; Norman Copp, Albert County, N. B

Palnure Lily, Can. No. 20111, $255.00; J. W. Coates, Havelock, N. B.

Jessie Morrison, Can. No. 20010, $240.-00; Alex. Murray, Kingston, N. B.

Mall of Borgue, Can. No. 20037, $295.-00; J. M. Harper, Woodstock, N. B.

Dolly O'Neill, Can. No. 20094, $280.-00; J. N. Harper, Woodstock, N. B.

Cuckoo, Can. No. 20093, $275,00; C. E. Rigby, Hartland, N. B.

Queen of Spades, Can. No. 20112, $280.00; W. F. Woods, Welsford, N. B.

Starling, Can. No. 20113, $295.00; Obdurs Shaw, Middle Simonds, N. B.

Winsome Bessie, Can. No. 20117, $260.00; John B. Barton, Armstrong's Corner, N. B.

Lady Fortuna, Can. No. 20033, $250.-00; Stanley White, Wicklow, N. B.

Lady Gavina, Can. No. 20099, $280.-00; N. P. McLeod, St. John.

Nancy Leaston, Can. No. 20039, $300.-00; Obdur Shaw, Middle Simmonds, N. B.

Lady Radnor, Can. No. 20102, $295.-00; F. C. Ebbett, Gagetown, N. B.

Beli Scott, Can. No. 20091, $295 00; David Aiton, Sussex, N. B.

Lady Crawford, Can. No. 20032, $220-09; G. H. Legere, Shediac, N. B.

Rosie Ronald, Can. No. 20043, $245.00; J. M. Harper, Woodstock, N. B.

Woodend Pearl, Can. No. 20119, $345.-00; C. H. Rasmussen, Grand Falls, N. B.

Lady McCall, Can. No. 20101, $305.00; John M. Harper, Woodstock, N. B.

Dore Sproat, Can. No. 20016, $240.00; Jas. Russel, St. Andrews, N. B.

La Belle Electra, Can. No. 20009, $290.00; Kenneth Raymond, Bloomfield Station, N. B.

The stallion Ace of Spades, Can. No. 7234, was withdrawn at $800.00.

Maritime Beekeepers' Association.

The seventh annual meeting of the Maritime Beekepers' Association was held in the Board Room of the Winter Fair building on the 8th day of December 1909.

I. C. Craig, President, in the chair. Besides the President the following Beekeepers were present: Mr. I. Corbell, Amherst St.; Rev. P. S. McGregor, Kingston, N. S.; Mr. I. E. Stocker, Fredericton, N. B.; W. B. Wallace, Newport, N. S.; G. C. Chappell, Northport; W. M. Lillan, Falmouth; E. J. Johnson, Georges River, C. B.; C. A. Fawcett, Memmamcook, N. B. and B. W. Baker.

The minutes of the previous year's meeting were read and approved.

The Treasurers report was audited found correct and passed. The balance to credit of the Association was found to be $11.74.

On motion it was decided to have Glowing in bee cullion sent to each member of the Association for another year.

Moved by Rev. R. S. McGregor, seconded by G. C. Chappell and carried that Mr. McLeod of the MARITIME FARMER be a committee to draft and present to the Minister of Agriculture at Ottawa and to the Legislatures of N. B., P. E. I. and N. S. resolution requesting a grant of money to the Maritime Beekeepers' Association to be used for the encouragement of the Beekeeping industry in these Provinces.

On motion the following officers were elected for the ensuing year:

I. C. Craig, president; J. E.Stocker, director for N. B.; R. Donaldson, director for N. S.; Theo. Ross, director for P. E. I.; Geo. Cheppell, auditor; B. W. Baker, Sect. treasurer.

B. W. BAKER, Amherst, N. S.

Capacity of Silos.

The capacity of silos of different size is a question of interest to everyone contemplating building a silo. When silos first came into use, square and oblong structures were built, but in recent years these shapes have gone out of use and nothing but circular silos are now constructed. In a table below we give the capacity of silos having diameters varying from 12 to 24 feet. The figures are also according to King of Wisconsin and are considered standard:

Dia. of silo.	Depth of Silo			
	29	30	31	32
12	64	68	70	73
14	88	93	96	101
16	114	119	125	131
18	144	151	158	166
20	178	187	195	205
21	195	206	215	226
22	215	226	236	248
23	235	247	258	271
24	265	270	282	295
25	278	292	305	320

In figuring the size to build a silo, one must take into consideration the number of cattle that are to be fed from it. A dairy cow will consume from 30 to 40 pounds of silage a day, the latter figure being usually considered a maximum amount. Your stock will, of course, eat less. It is not only essential to build a silo large enough to accommodate a given herd, but the diameter of the structure must also bear a certain relation to the size of the herd. In other words, it is necessary to feed a layer of silage at least one and one-half inches in thickness every day, in order to keep the top from scouring. For this reason there is such a thing as getting the diameter of the silo too large for a herd of given size. Knowing the average weight of a cubic foot of silage, as indicated below in this article, and the number of cattle to be fed, one can readily calculate what the diameter of the silo should be in order to remove one and one-half inches of silage per day.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

Subscription Price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate when subscribing are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definite order for dis. continuance is given.

The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—**"I saw your adv. in the MARITIME FARMER."**

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Address all letters and make all checks, money orders, postal notes, etc., payable to

The Maritime Farmer,
or R. D. ROBINSON PUBLISHERS, Ltd.
SUSSEX, N. B.

Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

DECEMBER 21, 1909.

Dates of Issue.

January..... 10-24
February..... 7-21

LAST CALL TO THE SHORT COURSES.

Before the next issue of the MARITIME FARMER reaches our readers, the Christmas holidays of 1909 will be past and gone and the short courses at the Nova Scotia Agricultural College, Truro, will be in full swing. Each succeeding year sees an increasing interest, among our farmers and their sons and daughters, in matters pertaining to agricultural education. Not every one can afford the time or means to take a full course at the college, but few, if any, of our farmers, are in such circumstances that they can afford to miss the opportunities offered by the college short courses. Present indications point to a very large class when the courses open on January 4, 1910. Will you be one of the number? We know from experience that you can see a great deal of work ahead of you if you stay at home—you can possibly see enough work to keep you busy for months even if you were inclined to work twenty-four hours each day. No matter how busy you may be we can candidly tell you that it will pay you well to cease operations for two weeks, or get some one to do the work for you, and go to the short courses at Truro. Satisfied clients are the best advertisements any firm can have. The boys, and girls, too, who have attended the college in previous years are satisfied that their time and money were profitably spent. The ideas gleaned at the college come to their assistance and help them do their work in a more systematic, businesslike way than they had been accustomed to before entering the college. There, one can glean high ideals that tend to raise the student above the narrow sphere in which too many of our people are prone to walk contented with merely eking out an existence. Some of our farmers and their sons have been so well satisfied with the short courses that they have cast aside all barriers and have come back year after year. Is not that a tribute to the good work done for them by the college? The instructors are well known as experts in their respective classes. What they have done in former years for others they will do for you if you give them the chance. Plan your work ahead now and when the early days of January comes along you will go to Truro where you will meet as good a crowd of boys as ever lived and where by social intercourse with students from all parts of the Maritime Provinces your intellectual horizon will be broadened and you will go home after the classes are over with higher ideas of your profession and of the noble body of men which it comprises. Just one other thought and we will leave you to think this matter over; it is this: After deciding to attend the short courses, which you should do right away, drop a card to Professor Cumming, Truro, telling him you will attend the the 1910 short courses.

A SEASON FOR NEW RESOLUTION.

Perhaps there is no season of the year when so many people settle down to plan and make new resolutions as the present. The last days of the old year, in almost every case, finds people planning on "turning over a new leaf," as they say, or determining to do better in the future than in the past, and going forward into the new year with a determination to bring their resolutions to a successful culmination. Let the resolutions be tempered with reason and just aim of principle and purpose, lest "Thou Fool" be the answer. Some go forward with their resolutions ever in view and looking forward to higher ideals, and consequently success follow them sooner or later; others forget their resolutions as soon as they are made, and as a result, each succeeding year finds them plodding along in the same old groove. Let us no longer belong to the latter class, but rather choose the plans exemplified by the former class, and with stubborn persistency aim to make the year 1910 a profitable one. Following are a few resolutions that are worthy of consideration:

Resolved to attend the short courses at the Truro Agricultural College.

Resolved to be more up-to-date in my farming operations.

Resolved to help supply the demands of the home market.

Resolved to attend as many institute and farmers' meetings as possible.

Resolved to feed and care for my stock better than ever.

Resolved to test my cows and to get rid, by the shortest possible route, of each and every animal that does not pay for its keep.

Resolved to feed, weed and breed my herd of cows so that I may bring them up to an average of at least 8000 pounds of milk per year, and by systematic selection, aim for even higher individual production.

Resolved to sell nothing from the farm except as a finished product.

Resolved to be more carefel in the handling of dairy products.

Resolved to keep a strict account of all my transactions so that I may know my financial standing at any time.

Resolved to store enough ice to last for all household and dairy purposes for one year.

Resolved to be more careful in the housing of my farm machinery.

Resolved that whenever I appear in public I shall strive to do so in clean, respectable attire and thus help to uplift my vocation.

Resolved to read all I can about my chosen calling and take a deep interest in matters that require the attention of all good citizens.

Resolved to secure, at least, one new subscriber to the MARITIME FARMER, knowing the more agricultural literature that is read by my neighbors, the the more rapid will be the progress of advanced agriculture.

THE TWILIGHT OF 1909.

Christmas is almost here and the twilight of 1909 is rapidly stealing upon us. Soon Father Time will have pulled up the anchor of the year and 1909 will be allowed to drift off into history. Like an influence it can never die. It will have a silent place in the foundation of future history. Like a word let slip, it will never be recalled. The use we have made of it can never be changed, 1909 has given us a fairly good season. There is noticeable prosperity on every hand. Many difficulties have been encountered and met. Filled with hopes for favorable seasons next years you do not feel sorry as you watch the twilight gather. You look forward to awakening activities, after a brief rest from field work. If you have spent your time and energies well during 1909, you will feel at peace with the world and welcome the young, untiring 1910.

To those who are despondent over past failures, past blunders or over the little progress made, we ask that you sit down in the twilight of 1909 and think over, with those dear to you, the whole situation. Try and find out why things were not better. Hold a session of retrospect and introspect with yourself. If your disappointments are due to faults of your own, face the fact bravely and resolutely say you will profit by the mistakes of the past year. If it is not your fault that things have gone against you, know this, that a cheerful and hopeful disposition will overcome obstacles more readily than a sullen, discouraged one. Just as surely as there has been a twilight to the day and year, so there will be a twilight to every hope, every ambition, every effort, a time when things are not as bright as you have seen them. But these twilights need not disconrage you. Gather yourself together for another honest, persistent effort, lacked by strong, sincere resolutions in the dawn of 1910.

COUNSEL TO YOUNG MEN.

A New York banker in a recent address to young business men, said :

"Young men in any business should always maintain a cheerful disposition and pleasant demeanor under all circumstances and conditions, and cultivate the happy faculty of making everyone who comes in contact with them feel perfectly at ease. The young man whose desires to succeed and advance in his chosen calling should also be an unceasing student of system and be willing to devote some of his time to reading and the study of improved methods calculated to make him more valuable to his employers."

EDITORIAL NOTES.

Before you receive another visit from the MARITIME FARMER we will all be ushered into the new year. We desire to thank all hands for their hearty co-operation and good words in 1909 and solicit a continuance of the same in 1910.

* * *

A Merry Christmas and a Happy and Prosperous New Year to all our readers is the hearty wish of the management and editors of the MARITIME FARMER.

* * *

No better proof of the value of the short courses at Truro can be found than that industrious, intelligent, young farmers who would not spend money or time foolishly, who have been induced, perhaps through curiosity to attend the courses during the first and second years of their inception at Truro, have been going back each succeeding year to glean more knowledge. We know several young men of this class who are preparing to attend again this year. Tuition is free and board may be secured at $3.50 to $4.00 per week. A seed fair will be held on January 11th. Be with the rest of the Maritime Provinces, progressive farmers and farmers' sons and daughters, at Truro on January 4th. You will assist the principal very materially by sending him a card telling him you expect to attend the courses.

Prize List Maritime Winter Fair 1909.

BEEF CATTLE.

Class 1—Shorthorns.

Steer two years old and under three, 1, Edwin Forrest, Amherst Pt.; 2, Harold Etter, Westmorland Pt., Jack; 3, Geo. M. Holmes, Amherst, N. S., Jack; 4, Harold Etter, Westmorland Pt., Bob.

Steer 18 months and under two, 1, Hazen Etter, Westmorland Pt., Ernest; 2, Chas. A. Forrest, Amherst Pt., Cecil; 3, Harold Etter, Westmorland Pt., Royal.

Steer 1 year and under 18 months, 1, Cecil T. Coates, Nappan, N. S.; 2, Geo. M. Holmes, Amherst Pt., Jim.

Steer 6 months and under 1 year, 1, Harold Etter, Westmorland Pt., Red Feru; 2, Geo. Holmes, Amherst, N. S., Bobs; 3, Hazen Etter, Dan.

Steer under 6 months, 1, Harold Etter, Snowdrift; 2, George H. Holmes; 3, Harold Etter, Bill.

Cow or heifer 3 years or over, 1 and 4, C. A. Archibald, Truro, N.S., Roan Lady and Duchess of B. V. XI; 2 and 5, Harold Etter, Lady Joan VII, Lady Minto; 3, Donald Freeman, Amherst, N. S., Roan Strathallan.

Heifer 2 years old and under 3, 1, 2 and 4, C. A. Archibald, Roan Katrina of B. V., Rosabella XIV and Lady Roan; 3, Hazen Etter, Pansy Blossom; 5, Laurie M. Anderson, Sackville, M. B., Snowflake; 6, Harold Etter.

Heifer 18 months and under two years, 1, Harold Etter, Lady Ruler; 2, C. A. Archibald, Heronia, 3, J. McCully Pipes, Amherst Pt., White Princess.

Heifer 1 year and under 18 months, 1 and 5 C. A. Archibald, Merry Maid V and Lady Woodland III., 2, J. McCully Pipes, Jessie; 3, D. Freeman, Amherst, N. S., 4, Harold Etter, Queen Marie.

Heifer under 1 year, 1, 3 and 4, C. A. Archibald, Mermaid, Duchess of B. V. V and Red Maid; 2, Geo. M. Holmes, Red Rose.

Heifer, under 6 months, 1 and 2, C. A. Archibald, Merry Maid VI and Gilt of B. V.

Sweepstakes, best animal any age, 1, C. A. Archibald, Merry Maid V.

Class 2.—Special Prize.

Donated by the Terrace Hotel, Amherst, best female any age, C. A. Archibald, Merry Maid V.

Class 3.

Donated by R. L. Ralston, Barrister, Amherst, best steer any age, Cecil T. Coates.

Class 4.

Donated by M. J. O'Brien, railway contractor, Montreal, silver cup for best Shorthorn animal any age, C. A. Archibald, Merry Maid V.

Class 5.

Everything in this class went to W. W. Black.

Championship in Classes 1 and 5.

Silver cup donated by Hon. Sir Frederick Borden, Minister of Militia, for best animal any age in classes 1 and 5, won by W. W. Black, Amherst N. S.

Class 6.—Grades of any Breed.

Steer 3 years old and upwards, 1, W. W. Black; 2, C. W. Pugsley, Barronsfield; 3, Amos Fowler, Amherst Pt., 4, Charles A. Forrest, Amherst Pt., 5, Laurie Anderson.

Steer 2 years and under 3, 1, W. W. Black; 2, Hazen Etter; 3, Albert Anderson, Sackville, 4, Edwin Forrest; 5, Charles A. Forrest; 6, Amos Fowler.

Steer 18 months and under 2 years, 1, W. W. Black; 2, Albert Anderson; 3, Laurie M. Anderson; 4, Edwin Forrest; 5, C. W. Pugsley; 6, Cecil T. Coates.

Steer 1 year and under 18 month, 1 and 2, W. W. Black; 3, T. J. Etter; 4, Chas. A. Forrest; 5, Cecil T. Coates; 6, Laurie Anderson.

Steer 6 months and under 1 year, 1, Laurie M. Anderson; 2, H. Etter; 3, 4 and 5, Albert Anderson.

Steer under 6 months, 1, W. W. Black; 2 and 3, Albert Anderson; 4, Amos Fowler; 5, Harold Etter.

Cow 3 years old and upwards, 1 and 3, W. W. Black; 2, Laurie M. Anderson; 4, Harold Etter; 5, Thos. J. Etter; 6, Amos Patterson.

Heifer 2 years old and under 3, 1, Amos Fowler; 2, W. W. Black, 3, Laurie M. Anderson; 4 and 5, Chas. A. Forrest; 6, Amos Patterson.

Heifer 18 months and under 2 years, 1, Chas. A. Forrest; 2, Amos Fowler; 3, W. W. Black; 4, Laurie M. Anderson; 5, Hazen Etter; 6, Albert Anderson.

Heifer 1 year and under 18 months, 1, Albert Anderson; 2, H. Etter; 3 and 4 Chas. A. Forrest; 5, Amos Patterson.

Heifer under 1 year, 1, W. W. Black; 2, Albert Anderson; 3, Cecil T. Coates; 4, Laurie M. Anderson.

Best steer any age, forty rods of wire fence, donated by the N.B. Wire Fence Co., Ltd. Monoton, W. W. Black.

Best female any age, goods valued $12.00, donated by the Amherst Foundry Co., Amherst, 1, T. J. Etter; 2, Courtney Lusby, West Amherst; 3, Laurie M. Anderson.

Championship in Class 6.

Silver cup donated by Hon. Wm. Pugsley, Minister of Public Works, for best animal in class 6 to be won three times, not necessarily consecutively, before beoming the property of the exhibitor. No animal shall win more than one cup. won in 1907 by W. W. Black and in 1908 by W. W. Black; 1909 by Amos Fowler.

Class 7.—Dressed Beef Carcasses.

Dressed beef carcasses from animals shown in foregoing classes, 1 and 5, Amos Fowler; 2, W. W. Black; 3, Chas. A. Forrest; 4, Thos. J. Etter.

Class 8.

Donated by Amherst Boot & Shoe Co., Ltd., Amherst, 1, best steer, any breed or grade, competing in foregoing classes, not having received a prize at the Winter Fair, $8.00, Amos Fowler.

Best cow any breed or grade, Albert Anderson, Sackville.

Best heifer any breed or grade, Geo. M. Holmes.

Class 9.—Giles Cup.

Donated by C. H. Giles, Brooklands, Fredericton, N. B., cup valued at $50.00 for the best beef animal under two years of any breed or grade, W. W. Black.

48 Hour Dairy Test at the Maritime Winter Fair.

Name of Competitor.	No.	Name of Cow.	Lbs. Milk.	Per Cent. Butter Fat.							Total Score.	Prize.
				Class.	Sec.							
G. M. Holmes	17	Miss Amherst	63.0	14	1	3.2	2.9	3.3	3.2	3.9	2.8	65.73	1st.
McIntyre Bros	49	Victoria	82.6	15	1	3 8	4.2	4 2	3.7	4.0	4.4	112.79	1st.
" "	50	Emma of S	79.3	15	1	3.4	3.8	3.7	3.4	3.6	3.8	93.77	2nd.
" "	51	Maggie of S	79.1	15	1	3.3	3.8	3.6	3.5	3.5	3.4	89.5	3rd and
Fred S. Black	42	Blythe of S	72 3	15	1	3 9	4.5	3 6	3.7	3.8	3.8	89.5	4th.
C. A. Archibald	52	Myrnie of B. V	78.0	15	2	4 6	4.5	4 6	4.2	4.3	4.6	106.53	1st.
McIntyre Bros	45	Gem of S	73.3	15	2	3.6	3.7	4.0	3.6	3.5	3.7	88.52	2nd.
" "	48	Maud of S	65.4	15	2	3.9	4.1	4.0	4.0	3.7	4.0	87.5	3rd.
" "	47	Mary of S	47.0	15	2	3.8	3.8	3.9	3.4	3.7	3.8	58.75	4th.
Fred S. Black	41	Pinnafore 2nd of S	64.7	15	3	3.8	3.5	4.2	3.8	4.7	5.5	86 38	1st.
McIntyre Bros	44	Alcemeda	55.9	15	3	3.9	4.0	4.1	4.2	4.0	4.0	76 57	2nd.
" "	46	Mag of Springbrook	47.2	15	3	3.6	3.6	4.1	4.5	4.3	4.4	65.81	3rd.
Elois of S	43		47.4	15	3	3.6	3.7	3.9	3.8	3.8	3.7	60.43	4th.
Logan Bros	56	Maplegrove Louise	133.8	16	1	3.1	3.3	4.3	5.3	4.0	4.3	171.47	1st.
R. L. Hicks	61	Belle D. Queen	148.1	16	1	3.4	3.6	5.8	3.7	3 4	3.4	168.65	2nd.
S. Dickie	66	Fraula Honda	148.6	16	1	3.5	2 9	3.2	2.9	3 2	2.8	150.8	3rd.
Logan Bros	55	Segis K	125.8	16	1	3.7	3.8	3.7	3.3	3.4	3.5	144.29	4th.
A. Dickie	68	Nellie	121 9	16	1	3 8	3.8	3.5	3.4	3.3	3.5	142.7	5th.
Logan Bros	60	Orne Rooker	113.0	16	1	4.6	3.7	3.1	4.2	2.8	3.0	141.5	
S. Dickie	67	Lilac	115.0	16	1	3.6	2.9	3.0	3.3	2.6	2.8	112.0	
Logan Bros	54	Homestead N	104.3	16	1	3 7	3.0	3.1	2.9	2.6	2.7	107.31	
" "	58	Homestead Minnie	113.2	16	1	2.6	2.0	2.5	3.2	2.6	2.8	101.08	
A. E. Dickie	65	Nellie's Beauty	115 7	16	2	4.0	3.8	3.5	3.1	3.1	3.7	132.3	1st.
Logan Bros	57	Brookland Laura	92.9	16	2	3.4	3.2	3.3	3.3	3.1	3.4	104.43	2nd.
S. Dickie	64	Blanche L	87.0	16	2	3.6	3.6	3.0	2.8	2.8	3.5	93.64	3rd.
A. E. Dickie	63	Lorendailla M	95.9	16	3	3.8	3.2	3.3	3 2	2.9	3.1	101.92	1st.
S. Dickie	62	Jewel	78.9	16	3	3.4	3.2	4.0	3.6	3 2	3 6	89.77	2nd.
Logan Bros	53	Artis J. O	74.3	16	3	3 2	3.0	3.0	3.3	2.8	3.3	81.00	3rd.
" "	59	Ruby C	67.4	16	3	3.2	3.0	3.0	2.8	2.7	3.2	76.03	4th.
Roper Bros	28	Jennie's May	60.1	17	1	3 9	3.7	4.2	3.9	4 0	4.4	93.45	1st.
" "	23	Beauty	40.3	17	1	5.7	5.1	5.2	5.7	5.0	5.4	79.9	3rd.
A. W. Roper	75	Dollie of V	61.9	17	1	4.0	3.9	4.0	4.2	3 4	3.9	82.01	2nd.
Roper Bros	22	Retjie	51.6	17	1	4.4	4.4	4.3	5.0	4.4	4.3	78.49	4th.
A. W. Roper	27	Jennie's Mary	78.2	17	2	4.3	4.6	5.0	4.7	4.4	5 0	111.8	1st.
Roper Bros	20	Nina's Emma	51.0	17	2	4.4	4.2	3.8	4.2	3.9	3.9	70.3	2nd.
" "	21	Saline	47.8	17	2	5.0	4.2	4.3	4.5	4.3	3.9	64.7	3rd.
" "	24	Dollie of Willow	40.4	17	3	6.7	5.7	6.0	6.5	4.8	5.9	80.74	1st.
A. W. Roper	26	Ada of W	52.4	17	3	4.0	4.0	4.4	4.0	4.0	4.5	72.92	2nd.
J. E. Baker & Son	31	Maud	75.1	18	1	5.0	4.8	5.0	5.0	4.8	5.0	113.3	1st.
" "	29	Taybrook P. 2nd	63.3	18	1	4.7	4.0	4.6	4 0	3.9	4.8	110.8	2nd
H. S. Pipes & Son	33	Rubena	48.0	18	1	3.9	4.0	4.0	3.7	3.8	4.2	78.5	3rd.
" "	34	Dainty's Chris	55.7	18	1	6 0	5 1	5 5	5.5	4.7	5.6	77.8	4th.
" "	35	B. Tina	51.2	18	1	4.6	4.2	4.3	5.0	4.1	4.6	75.65	5th.
" "	32	Ora	58.8	18	2	4.4	4.0	4.2	4.7	3.8	4.0	67.6	
" "	38	Daisy dean	59.5	18	2	4 6	4.5	4.6	4 6	4.6	4.8	82.33	1st.
J. E. Baker & Son	37	Lotta	45.9	18	2	4.6	4.4	4.2	4.1	4.2	4.2	78.96	2nd.
J. R. Semple	36	Lady Blanche	66.6	18	2	4.5	4 8	4.2	5.5	4.7	4.9	69.9	3rd.
H. S. Pipes & Son	30	Hillside's Best	52.0	18	3	4.2	4.5	4.1	4.6	3.5	4.2	88.6	2nd.
" "	11	Jennie of Glen View	41.6	18	3	6.3	6.9	6.1	5.8	5.4	6.5	94.14	1st.
" "	39	Olive	28.3	18	3	3.2	3.8	3.9	4.0	4.0	4.2	50.6	3rd
W. W. Black	40	Aanie	119.4	19	1	5.1	4.5	4.8	5.4	4.7	4.9	46.7	
J. R. Semple	14	King Pin	83.6	19	1	4.2	4.5	4.0	3.2	3.5	3.4	143.16	1st.
W. N. Boomer	10	Milkey	96.6	19	1	4.9	5.1	4 5	4 3	4.7	4 2	118.23	2nd.
T. W. Keillor	7	Bess	117.7	19	1	3 7	3.8	4.0	3.5	3.6	3 4	112.3	3rd.
Roper Bros	6	Fannie K	70.6	19	1	2.2	2.5	2.6	2.4	2.6	3 6	108.55	4th.
W. E. Harding	19	Nellie	77.4	19	1	4.8	4.0	4.4	5.2	4.0	4.7	99.47	5th.
T. W. Keillor	8	Reddy	82.3	19	1	3.4	3.4	3.4	3.2	3.5	3 3	90.06	
J. R. Semple	4	Sallie	45 2	19	1	3.9	5.7	4.4	3.8	3.4	3.5	96.41	
F. S. Black	12	Fawn	76.4	19	2	5.4	5 1	5.7	5.4	5.5	5.8	78.51	3rd.
McIntyre Bros	2	Pearl	63.1	19	2	7.3	4.2	4.5	3.6	4.4	5.7	102.48	1st.
J. R. Semple	1	Ida	60.0	19	2	3.9	4.2	4.2	4.4	3.7	4.1	90.05	2nd.
Amos Fowler	13	Beauty	88.9	19	3	5.2	5.0	4.7	5.2	3.2	5.2	87.54	2nd.
L. M. Anderson	9	Ida	61.3	19	3	3.2	3.4	3.5	3.4	3.1	3.2	94.19	1st.
T. W. Keillor	15	Grade	54.5	19	3	4.1	4.3	4.5	4.3	3.4	4.3	78.98	3rd.
" "	3	Ollie	56.6	19	3	4.2	4.6	4 2	4 0	4.2	3.9	73.67	4th.
" "	5	Annie K	54.5	19	3	3.0	3.2	3.6	3.3	3.2	3.2	69.84	5th.
Roper Bros	18	Maude	54.5	19	3	3.4	3.6	3.4	4.0	2.4	4.0	66.94	
G. M. Holmes	16	Grade	38.1	19	3	3.5	3.8	3.8	3 3	3.9	3.6	54.11	

Class 10

Best female, any breed or grade; not having won a prize. The Frost Wire Fence Co., Ltd., Hamilton, Ontario, Harold Etter.

Class 12.

Donated by the Blatchford Calf Meal Co., Waukegan, Ill., represented by A. A. Archibald, Truro, for best calf under 1 year, any breed or grad, fed on Blatchford Calf Meal, C. A. Archibald.

Donated by the Blatchford Calf Meal Factory, Waukegan, Ill., represented by A. A. Archibald, Truro, for best beef animal any breed or grade, W. W. Black.

Class 13.

Donated by the Atlas Stock Food Co., Amherst, for the best beef animal, any breed or grade, under 18 months, fed on Atlas Stock food, $10 00. Exhibitor must show at least one empty package, W. W. Black.

DAIRY CATTLE.

Shorthorns.

Cow 4 years and upwards, 1, George M. Holmes.

Class 15.—Ayrshires.

Cow 4 years old and upwards, 1 and 2, McIntyre Bros., Sussex; 3, F. S. Black, Amherst, and McIntyre Bros.

Cow 3 years old, 1, C. A. Archibald; 2, 3 and 4, McIntyre Bros.

Heifer 2 years old, 1, Fred. S. Black, Amherst; 2, 3 and 4, McIntyre Bros.

Ayrshire Specials.

Cow 4 years old and upwards, 1 and 2 McIntyre Bros.

Cow 3 years old, 1, C. A. Archibald; 2, McIntyre Bros.

Heifer 2 years old, 1, F. S. Black, 2, McIntyre Bros.

Class 16.—Holsteins.

Holstein Cow 4 years old and upwards, 1, Logan Bros, Amherst; 2, R. L. Hicks, Dalhousie Jct.; 3, Samuel Dickie, Central Onslow, N. S.; 4, Logan Bros; 5, Arthur E. Dickie.

Cow 3 years old, 1, Arthur E. Dickie; 2, Logan Bros; 3, Samuel Dickie.

Heifer 2 years old, 1 A. E. Dickie; 2, S. Dickie; 3 and 4 Logan Bros.

Holstein Specials.

Cow 4 years old and upwards, 1, Logan Bros,; 2, R. L. Hicks.

Cow 3 years old, 1 A. E. Dickie; 2, Logon Bros.

Heifer 2 years old, 1, Arthur Dickie; 2, Samuel Dickie.

Class 17.—Guernseys.

Guernsey cow 4 years and upwards, 1, 3 and 4, Roper Bros., Charlottetown; 2, Arthur W. Roper, East Royalty, P. E. I.

Class 18.—Jerseys.

Cow 4 years and upwards, 1 and 2, J. E. Baker & Sons, Barronsfield, N. S; 3, 4 and 5, H. S. Pipes & Sons, Amherst, N. S.

Cow 3 years old, 1, 2 and 3, H. S. Pipes & Sons.

Heifer 2 years old, 1 J. R. Semple, Brule, N.S.; 2, J. E. Baker & Sons; 3, H. S. Pipes & Sons.

Class 19.—Grades.

Cow 4 years and upwards, 1, W. W. Black; 2, J. R. Semple; 3, W. N. Boomer, Amherst Pt.; 4, T. W. Keilor, Amherst Pt.; 5, Roper Bros; 6, A. W. Roper.

Cow 3, years old, 1, F. S. Black; 2, McIntyre Bros; 3, J. R. Semple.

Heifer 2 years old, 1, F. S. Black; 2, J. R. Semple; 3, L. M. Anderson; 4 and 5, T. W. Keilor; 6, Roper Bros.

Grade Specials.

Cow 4 years and upwards, 1, W. W. Black; 2, J. R. Semple.

Cow 3 years old, 1, F. S. Black; 2, McIntyre Bros.

Heifer 2 years, 1, Amos Fowler; 2, J. R. Semple.

Donated by the T. Eaton Co., Ltd., Toronto, for the best herd of milch cows, to include one aged cow, one three-year old cow and one two-year-old heifer, 1, E. A. Dickie; 2, Arthur Roper.

Grand Championship.

Silver cup donated by Henry Birks & Son, Ltd., for the highest scoring cow in the Dairy Test of any breed or grade, Logan Bros.

SHEEP.

Class 20.—Leicesters.

Ewe 2 years or over, 1, 2, 3 and 4 Albert Boswell, Pownal.

Ewe 1 year and under, 1, 3 and 4, Albert Boswell; 2, Samuel C. Lane, Pownal;

Ewe Lamb, 1, 2, 3 and 4, Albert Boswell.

Yearling Wether, 1, Albert Boswell; 2, 3 and 4, Samuel C. Lane.

Wether lamb, 1 and 3, Samuel C. Lane; 2 and 4, Albert Boswell.

Class 21.—Lincolns.

Ewe 2 years old or over, 1 and 3, Albert Boswell Jr.; 2 and 4, Chas. Symes, Minudie, N. S.

Ewe 1 year and under, 1 and 3, Albert Boswell; 2 and 4, Chas. Symes.

Ewe lamb, 1 and 3, Albert Boswell; 2 and 4, Chas Symes.

Class 22.—Cotswolds.

Everything in this class went to H. B. Parlee, Sussex, N. B.

Class 23.—Cheviots.

Everything in this class went to Chas. Symes, Minudie, N. S.

Class 25.—Southdowns.

Ewe 2 years old and over, 1: J. E. Baker & Son; 2 and 4, Cephas Nunn; 3, Oliver C. Saunders, Triby.

Ewe 1 year old and under 1, Oliver C. Saunders; 2 and 4, Cephas Nunn; 3, J. E. Baker & Son.

Ewe lamb, 1 and 3, J. E. Baker & Son; 2, Oliver C. Saunders; 4, Cephas Nunn.

Yearling Wether, 1, Jas. E. Baker & Son.

Wether lamb, 1, Oliver C. Saunders, 2, J. E. Baker & Son.

Class 26.—Shropshires.

Ewe 2 years old or over, 1 and 3, Logan Bros.; 2, Cephas Nunn; 4, George Boswell.

Ewe 1 year old and under 2, 1, Geo. Boswell; 2, 3 and 4, Logan Bros.

Ewe lamb, 1 and 4, Logan Bros, 2, James Stewart, Amherst Pt.; 3, Geo. Boswell.

Yearling Wether, 1 and 3 Logan Bros.; 2, Jas. Stewart.

Wether lamb, 1 and 2, James Stewart, 3, Logan Bros.

Class 27.—Oxfords.

Ewe 2 years old or over, 1 and 2, J. E. Baker & Son; 3 and 4, Burder Goodwin, Baie Verte.

Ewe 1 year old and under 2, 1, Burder Goodwin; 2, 3 and 4, J. E. Baker and son.

Ewe lamb, 1, 2 and 4, J. E. Baker & Son; 3, Burder Goodwin.

Yearling Wether, 1, J. E. Baker & Son.

Wether lamb, J. E. Baker & Son.

Class 28.—Hampshires.

Everything in this class went to Cephas Nunn.

Class 29—Suffolks

Everything in this class went to Albert Boswell.

Class 30.—Grades and Crosses.

Ewe 2 years or over, 1, James Stewart; 2 and 6, Logan Bros; 3, Cephas Nunn; 4, Geo. Boswell; 5, Samuel C. Lane.

Ewe 1 year and under 2, 1, Jas. Stewart; 2 and 4, Logan Bros; 3, Samuel C. Lane; 5, Oliver C. Saunders; 6, A. H. Boswell.

Ewe lamb, 1, 3 and 4, Jas. Stewart; 2, Logan Bros.; 5, Oliver C. Saunders.

Yearling wether, 1 Jas. Stewart; 2 and 5, Samuel Saunders; 3, Logan Bros; 4, Oliver C. Saunders.

Yearling wether, 1, Jas. Stewart; 2 and 5, Samuel C. Lane; 3, Logan Bros.; 4, Oliver C. Saunders.

Wether lamb, 1, Jas. Stewart; 2 and 3, Oliver C. Saunders; 4, Logan Bros.

Class 31.—Dressed Sheep Carcasses.

Dressed sheep to be shown from any sheep over 1 year old exhibited in foregoing classes, 1 and 2 J. E. Baker & Son; 3, Samuel C. Lane; 4, Cephas Nunn; 5, Logan Bros.; 6, Oliver C. Saunders.

Dressed carcasses to be shown from any sheep under 1 year old exhibited in foregoing classes, 1, 3, 4 and 5, Jas. Stewart; 2, Oliver, C. Saunders; 6, Logan Bros.

(Continued on page 142.)

HORTICULTURE

Nova Scotia Fruit Growers' Association.

The forty-sixth annual meeting was held in the Court House at Kentville, on Dec. 1st, 2nd and 3rd. Kentville is the centre of the fruit belt of the province, the shiretown of Kings County, with all its people thoroughly interested in fruit growing. F. M. Chipman, of Annapolis County, was President for the past year and in his opening address said, in part :

"We extend a cordial welcome to the members, friends and guests, who may be with us to-day from other provinces, and hope our meeting together will be of mutual benefit, and will awaken within us new ambitions, stronger hope and greater determination to make our horticultural life even a greater success.

"The spring of 1909 opened rather cold and backward, retarding the growth of vegetation and causing the apple trees to bloom some days later than usual in the fruit district. The weather during the blossom season was all one could desire for pollenization, giving an abundant set of fruit.

"The summer and early autumn months being unusually dry, caused the fruit to make very little growth, until the latter part of September, from which time to the close of the fruit season, we were blessed with ideal weather for the growth and harvesting of the abundant crop of fruit, estimated by our best authorities at 700,000 barrels, 250,000 of which have already been shipped from the port of Halifax.

"In the early part of the season there was a good demand, with fairly good prices offered, and in some cases a keen competition arose between buyers, as to who should get the fruit, which at a later date began to wane, until some buyers refused to handle any more fruit at all.

"Various causes have been assigned for this decline in the fruit market. One is that the fruit was shipped too early in the season, especially the Gravensteins. Another, that the transportation facilities are not suitable for soft fruit, and, therefore, it arrived on the market soft and in a wasty condition.

"Another, that all apples, both early and late varieties, have been and are now ripening unusually early. Whether the reasons I have named or any other, or all combined, may have caused the decline in the apple trade, there is one fact we must not overlook, one which I want to particularly emphasize and call to your serious consideration. It is this: unless there are better methods adopted in the handling, on this side, and in the transportation across, our foreign trade in Gravensteins is done forever, with any degree of satisfaction and remuneration, to the producer and speculator as well.

"The usual insect pests have not been very destructive this year, excepting the canker worm in some localities, owing largely to the fact that intelligent and thorough spraying has been adopted and fruit growers are realizing more and more the necessity of adopting the most approved methods of treating their orchards to insure success. We have a reasonably cheap and effective means for destroying the canker worm, and it is greatly desired by fruit growers that such means be thoroughly applied in order that the pest be completely exterminated from our orchards which we believe to be possible.

"The Provincial Exhibition at Halifax this year, being held on a later date than previous ones, afforded an opportunity for fruit growers making a very creditable show of fruit, but on account of unfavorable weather, did not prove a financial success.

"The County, or District Exhibition, which was held at Middleton early in October, for the display of fruit, vegetables and poultry, compared very favorably with former exhibitions and proved a great success.

"I wish to call your attention to the question of "Summer Sorting" or "Thinning of Fruit in the Early Summer Months," which was discussed at our last annual meeting. At that meeting there was quite a large committee appointed, composed of some of our most progressive fruit growers, who, I am happy to say, have done something along that line, and no doubt will be able to report good results from their efforts.

"The long-sought for and much-desired Fruit Experimental Farm has not, as yet, materialized. It is a custom of our Government, when matters of importance are brought to their attention, to promise it their serious consideration. In the case of the Experimental Farm, we have two Governments interested, and will, therefore, require lengthy consideration before the matter can be properly adjusted. Our dying hopes are revived once a year by having an Upper Province man sent down, we presume, by the Minister of Agriculture, to look over the situation, examine a number of properties and report.

"We are entering the 46th anniversary of our Association, with the assurance that the same energy, ability and cordial co-operation of all the officers and members will, as in the past, enable us to overcome all difficulties and increase the usefulness of this noble institution.

"We have every reason for giving thanks to kind Providence for the abundant blessings bestowed upon the labors of our hands, thankful for the goodly heritage we have been permitted to enjoy, ever proud of the land of our birth and loyal to the flag that protects our homes."

Frank T. Shutt, M. A., Chemist of the Dominion Experimental Farm, Ottawa, was first on the program. Mr. Shutt is a prime favorite with the Valley fruit growers. His work is appreciated by all. His subject was "The Control of Moisture in Orchard Soils." He had numerous diagrams in illustrating and was heartily received. He spoke of his delight in coming to Nova Scotia, where he had so many warm friends. He began by speaking of the importance of controlling moisture in an orchard, the advantage of a cover crop, in so far as it controls moisture in the orchard soil. The old plan of not cultivating the orchard did not meet with Mr. Shutt's approval. Nor did he approve of raising a grain crop on orchard soil. Moisture is more than half the battle in raising fruit.

The question is what to do with the land in a young orchard. It may be solved by what is termed a "hoe" crop. This means liberal cultivation of soil, plenty of fertilizer, all of which the young trees need. However, he had no hard and fast rule—so much depended on soil and climate conditions. The paper was interspersed with most interesting and valuable questions and answers, and all present expressed themselves delighted. If they gathered nothing else of interest at the meeting, the afternoon's session was sufficient payment for their coming. The paper gave the benefit of the practical work done under Prof. Shutt's observations. His charts showed the moisture from cultivated orchard and orchard in sod. The first gave most gratifying returns.

L. D. Robinson introduced a discussion on "Winter Spraying". He enumerated the enemies of the farmer blights and bugs and the many varieties of worms and moths. One might cultivate and improve but if one doesn't kill the bug, their work is more than useless. He prescribed Bordeaux mixture, in small doses, and judiciously applied, what is known as the 3-3-40 mixture is what has given universal satisfaction and is used by all the largest growers. He advised the farmers to avoid getting any prepared mixture from the man who wanted to sell it.

Prof. Shutt followed with some interesting remarks re the chemistry of certain materials used in spraying, and later the discussion became general. Capt. C. O. Allen had a lot of information on the use of lime and sulphur as a spray—and the matter was thoroughly discussed at length.

A feature of the meeting was the presence and talks of Robert Thompson of St. Catherines, Ontario. Mr. Thompson is manager of the S. H. Catherine Storage and Forwarding Co. He is a hard headed practical business farmer and talks not from theory but from practice. Mr. Thompson is thoroughly at home on all questions concerning fruit, from growing to selling. This was his first visit to the Annapolis Valley and he was greatly impressed with the possibilities of the country.

The following officers were elected for the ensuing year:

President—E. E. Archibald, Wolfville.

Senior Vice-President—R. J. Messenger, Bridgetown.

County Vice Presidents:—

Annapolis County—G. C. Miller, Middleton.

Kings County—J. S. Bishop, Auburn.

Hants County—Mrs. Wm. Sangster, Falmouth.

Halifax County—G. N. McKeen, Gays River.

Lunenburg County—W. A. Hebb, Lunenburg.

Digby County.—H. M. Rice, Bear River.

Yarmouth County—S. A. Porter, Deerfield.

Shelburne County—C. S. McGill, Shelburne.

Queens County—Josiah Smith.

Colchester County—P. T. Shaw, Truro.

Pictou County—C. R. B. Bryan, Durham.

Cumberland County—Sandford Purdy, Westchester.

Antigonish County—F. R. Trotter, Antigonish.

Guysboro County—J. A. McMasters, Boyleston.

Victoria County—Mrs. Alex. Anderson, Baddeck Forks.

Cape Breton County—Dr. Kendall, M. P., Sydney.

Inverness County—Walter McDonald, Glendyer.

Richmond County—Donald Urquhart, West Bay.

Secretary—S. C. Parker, Berwick.

Assistant Secretary—M. H. Ellis, Port Williams.

Treasurer—George M. Munro, Wolfville.

Auditors—W. M. Black, J. Elliott Smith.

Executive Board:—The President, Vice President, Secretary, J. N. Chute, Berwick; W. O'Brien, Windsor; F. H. Johnson, Bridgetown; Col. S. Spurr, Melvern Square.

Exhibition Committee:—A. C. Starr, Arthur Johnson, Col. Spurr, F. H. Johnson.

Publication Committee:—The President, ex-officio, the Secretary, ex-officio John Donaldson.

Delegates to Farmer's Association:—P. Innis, Dr. Johnson.

Mayor Dr. H. B. Webster gave an excellent address of welcome referring in a flattering way to the work the Association had done for the province. Vice President R. J. Messenger replied expressing thanks to the town and citizens for their hospitality.

"Champion" Evaporators Make the Best Maple Syrup.

They make the kind that win the Blue Ribbons, and bring you fancy prices.

Instead of a dark colored syrup, you will get a clear amber colored syrup, full and fragrant of maple flavor.

The catalogue tells you all the newest ideas in Sugaring, and will show you how a "Champion" Evaporator will greatly increase your profits on your sugar bush.

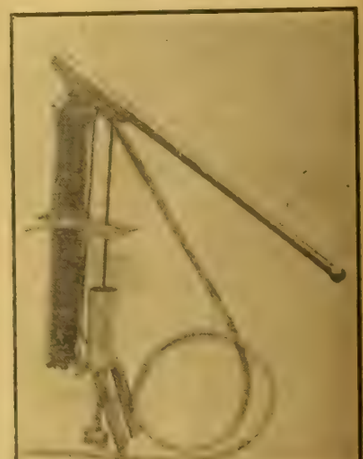
The Grimm Mfg. Co., 58 Wellington Street. MONTREAL.

The Expermintal Orchard Station.

It was intimated by Prof. Cumming at the Fruit Growers meeting at Kentville last week, that if the Executive of the Association would agree in recommending a location to the government that such a recommendation would probably be accepted by the government and the station established. With this suggestion the committee lost no time in getting to business. Before the session closed they had unanimously agreed that the advantage of Kentville as a location were pre-eminent and if a suitable place could be secured complying with the conditions, they would recommend the same. On the 8th inst the committee again met in Kentville, and spent a day in looking over the locality and unanimously agreed to recommend the Sharp Farm as the most suitable place for the object in view. This farm is about one half mile from Kentville station, is composed of 350 acres of land, including 25 acres of dyke lands and 150 of standing timber, much of it virgin forest. The place has been in chancery for twenty years and has not been cared for in a way to improve it any. The possibilities are unlimited and time and money will make a fruit station second to none in Canada.

S. C. P.

The Perfect Spray Pump No. 2



The Only Perfect Spray Pump.

Manufactured by

R. B. WESTHAVER,

Mahone Bay, - - N. S.

Grand Pianos

Our "Louis Grand" and "Baby Grand" are the consummation of piano excellence.

Every detail that adds to musical, structural and artistic perfection, are embodied in these masterly models.

The designs are typical of refinement and luxury—the richness of tone, in full keeping with their beauty and elegance.

New Scale Williams

Send us your name and address, and we will mail you our new catalogues, giving illustrations and full descriptions of New Scale Williams Grand and Upright Pianos.

We will also tell you about our new plan of buying New Scale Williams Pianos on easy payments.

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THE WILLIAMS PIANO CO. LIMITED, OSHAWA, Ont.

THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

The Home Orchard.

SOIL SHOULD BE WELL DRAINED.

We often hear people say it does not pay to plant trees; that there are so many pests to destroy either the trees or the fruit that the return does not compensate one for the time and labor expended in trying to grow an orchard. These statements are made in all sincerity, but before being able to decide the matter impartially it will be necessary to first consider what is meant by compensation. When the orchard is planned for home purposes only there can be no money return looked for from the sale of fruits, and our compensation consists of the enjoyment and gratification derived from the consumption of the fruit and the pleasure of always having it at hand when wanted. The same may be said of raising wheat just for home consumption. And when we go to great expense to build a house to shelter us from the storm we do not look for any money return, and yet we think it pays for the comfort and enjoyment we get out of it. In fact, nothing pays except as it bring us lasting peace and joy, for money in itself is worthless except as we may use it to add to our happiness or peace of mind. In this connection we will say that there is not one thing connected with the home that brings a greater return for the money and labor expended than the orchard. When once started it is there for what is usually considered a life time, and, with a variety, one is nearly always sure of a partial crop at least. Without the trees, no fruit is expected; with them, there is always a possibility of a crop, and one crop will more than pay for the cost of the trees,

About 35 trees, properly selected, should furnish all the apples an ordinary family would care for, even with a light crop, while on an apple year there would be many more than could be used In choosing the varieties, one of course desires those that ripen continuously from the earliest to the latest.

In selecting a cite for an orchard, one close to the house is preferred, if the soil is at all suitable. One of the most important considerations is the preparation of the soil for planting. It should be well manured, and drained if necessary, as trees will not thrive on a cold, clammy soil that is constantly saturated with moisture. It should be plowed deep. Apple trees should be planted about 30 feet apart each way; pears and cherries about 20 feet, and peaches and plums about 18 feet each way. They should be in straight rows, which will make cultivation more convenient. The holes thould be dug a little deeper that the trees are set, and then partially filled in with loose dirt. Then while one person holds the tree in position another should fil in the finest earth pressing it firmly about the tree and being careful not to put in any sods or stones. A bucket of water should then be poured on the loose earth, and it is a good idea to stake the trees, inclining them slightly to the southwest. This should be done in a way, however, that the bark will not be injured. The holes should be of sufficient diameter that the roots need not be twisted but may assume their natural position. All broken roots and twigs should be carefully pruned off and trees should not be planted any deeper than they were in the nursery. Apples may be planted either in the fall or spring, but I much prefer to plant in the spring. Other fruits I would not plant at any other time. The ground should be kept well cultivated, and we have found it very profitable to spread coarse manure around the trees every spring, extending it as far as the branches reach, but care should be taken not to pile it against the trees. Where this plan is carried out the resnlt can hardly be other than a fine home orchard, which will be a source of great delight to the family.—Home Orchard, Cumberland Co., N. S.

ARE YOU SATISFIED WITH A 20 ACRE CROP FROM A 40 ACRE FARM?

YOU know it costs as much in time, labor, seed and implements to raise a poor crop as it does to raise a good one. You know also that unless your land is kept constantly supplied with lime, nitrogen and phosphates and the ingredients of barnyard manure it becomes worn out and loses its fertility.

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Scientific experiment has proved that this profit will vary from $4.00 to $20.00 per acre.

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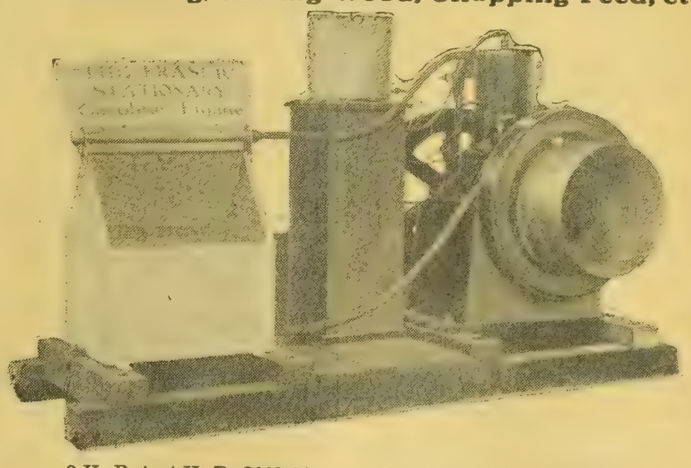

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C. W. McDougall, Dairy Inspector, staff Contributor.

The Care of Composite Milk Samples.

A composite sample of milk is a sample made up of two or more smaller samples of milk taken from the same source of supply, but taken at different times and from milk produced at different periods. On the farm these small samples represent different milkings from the same cow and the samples in this mixed condition are to represent the milk of that cow for a given period. In the creamery the small samples are to represent the daily delivery of a patron and the combined or composite sample is to represent the daily deliveries of that patron for a given time. This period of time usually extends from seven to fourteen days and the pint or so of milk collected in small amounts during this time forms the composite sample.

This method of collecting samples of milk to be tested is to be recommended, because it has been shown that by its use accurate determination of the fatty contents of milk or cream can be made with a smaller expenditure of time and money.

The per cent. of fat in the milk produced by individual cows varies greatly. The mixed milk of individual cows, or the milk of a herd does not vary so greatly in its composition because the higher per cent. of fat in the milk of one cow may for a day offset the lower per cent. of fat in the milk of some other member of the herd, and vice versa, but even under these conditions the variation in the per cent. of fat in the milk of a herd may be considerable from day to day.

It is, therefore, unsafe and unjust to assume that the product of any one day will accurately represent the product of any other day. When a small portion of each day's milk is taken and carefully mixed with similiar samples representing the product of other days, and the mixed milk is tested, we may expect to accurately determine the per cent. of fat in the milk which a cow is producing at that period of lactation, or the per cent. of fat in milk which a dairy farmer may be furnishing a creamery.

In securing and preserving composite samples of milk or cream, it will be well to observe the following points: The milk or cream must be thoronghly mixed by pouring from one pail or can to another several times to evenly mix the butter fat with the milk serum. A small dipper may be used to further agitate the milk. This dipper should have a solid metal handle for convenience in cleaning and the capacity shonld be about one ounce, or just large enough for measuring the desired sample into the jar in which it is to be preserved. By using the same dipper an approximately equal amount of milk may be taken at each milking, for at each delivery, until the composite sample is complete. Several cans or jars may be successfully used for composite samples, but naturally some are better than others. The first essential is that the jar be practically air tight, otherwise a small amount of water may evaporate or be taken up by the atmosphere, thereby slightly increasing the per cent. of fat in the milk or cream that remains in the jar. The second essential is that the jar be as simple as possible, that it have few parts, and preferably no parts of metal or rubber. The third essential is that the jar have a wide mouth, which can be easily and quickly opened and closed, to admit of rapid work in handling samples. The ideal jar for this purpose has a glass stopper.

It is necessary that the milk be kept in its natural liquid condition until the composite sample is complete and ready for testing. Changes in milk are due to the presence of development of bacteria. To prevent these changes all, or nearly all, bacteria in the milk samples must be killed. For the purpose of destroying bacteria very inexpensive chemicals or preservatives may be employed. Among the liquid preservatives that may be used for this purpose, a 40% solution of formalin may be recommended. The same amount of formalin placed in different jars of milk taken from the same supply, and the milk kept under the same condition of temperature will not always produce exactly like results in a given time. Information obtained in preserving several hundred composite samples of milk warrants the following statement.

FORMALIN.

Under ordinary conditions of temperature, varying from 50 to 80 degrees F., four or five drops of formalin will keep a pint of ordinary milk or cream in a good liquid condition for from nine to eleven days. Six or seven drops will preserve a pint of milk from ten to fourteen days. Eight to ten drops will preserve same amount of milk for a period of from fourteen to 20 days. A larger amount of formalin may be successfully used for preserving milk or cream for a longer period.

POTASSIUM BICHROMATE, OR "BICHROMATE OF POTASH.

Among the dry or powdered preservatives to be recommended for preserving milk and cream samples, Potassium Bichromate has proved to be very satisfactory in every instance. This chemical possesses great power as a destroyer of germ life and only very small quantities need be used. One tenth of a gram, or an amount of the preservative that could be piled on an area one-fourth inch square, is sufficient to preserve a pint of milk in good condition for testing for a period of from two or three weeks. The color of the milk is changed by this chemical to a reddish yellow. Potassium Bichromate is inexpensive and, like formalin may be purchased of the local druggists.

CORROSIVE SUBLIMATE TABLATS.

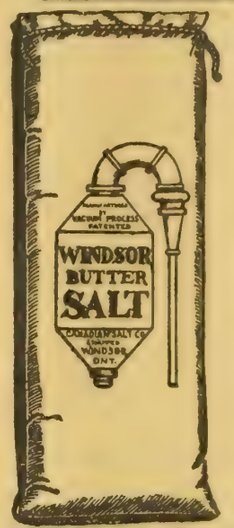
Tablets composed of Corrosive Sublimate combined with coloring matter for preserving samples of milk to be tested have recently been placed on the market by some of the dairy supply houses, and when used according to the accompanying directions produce satisfactory results. Undoubtedly a preservative in the tablet form possesses a distinct advantage over others for general purposes, as the proper amount of preservative can always be had without measuring.

In using preservatives, the entire amount should be added to the first lot of milk placed in the sample jar.

The preservative should be completely dissolved at once and thoroughly mixed with the milk.

Every time a new lot of milk is added to the sample the same should be thoroughly mixed with the old milk. Bottles and contents should also be shaken often enough to prevent the fat in the milk rising and forming a thick, tough layer of cream on the surface.

IVAN COMINGS WELD,
New Hampshire Agricultural Experimental Station.



There is hardly a farmer's daughter in Canada who does not know Windsor Salt.

It has been the universal standby for years.

Practically all the prize winners at the fairs have used Windsor Salt—last year, 95% of those winning cash, medals and premiums, made their prize butter with Windsor Salt.

If you have not been using Windsor Salt for butter making, get a sack and try it. You will then see why the prize butter makers use it.

7

Developing a Cow.

EDITOR MARITIME FARMER:

As with men, the parentage is of great value, and we look for and have a good reason to expect cows to be better cows from a long line of productive ancestry; so this then is the stepping stone in the developing of the dairy cow.

A profitable cow in my estimation is one that can produce in a year, or still better a series of years, a good maximum yield of butter at a cost that will yield a good profit to her owner and also produce a strong, healthy calf each year. This should be one of the requisites in securing a sire for the head of the herd; not only see that he is from a productive strain but from a family of regular breeders, because he not only reproduces his good qualities, but often intensifies his weak points as well. See that he is as near perfect in conformation and dairy makeup as possible, for with all the care we may exercise in the mating of our animals some falty ones will develop that we had not figured on; so if we have looked well to the end, to see that the size is right and that the dams we are to use for foundation are right, we have gone a long way toward their development.

Calves should be fed in such a way as not to impair either growth or digestion, for later on we are going to ask them to take care of a lot of feed so they mav develop and be profitable animals, but if fed and cared for in a careless and harmful manner their digestive faculties have been impaired, and they simply say, "we can't do it."

I am still a believer that heifers should not freshen too young. If allowed to drop their first calf at from 28 to 30 months of age, they will get a little more growth and strength, and we believe their digestive capabilities are also strengthened.

We have come to believe that a large part is due to the feed end of

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STANCHIONS

are swinging Stanchions. See the comfort and freedom they give to cattle. Are strongly made to stand the roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle because the latch is easily operated and absolutely secure.
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75% of all Gasoline Engine trouble come from poor Ignition.
The "VIM MAGNETO" does away with Batteries and can be used on any Engine. It always gives a good hot spark. Fully Guaranteed — Agents Wanted.
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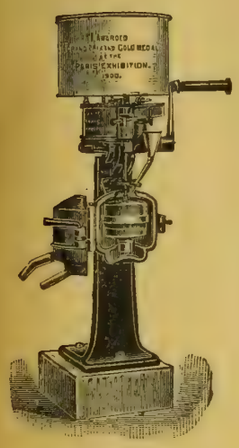

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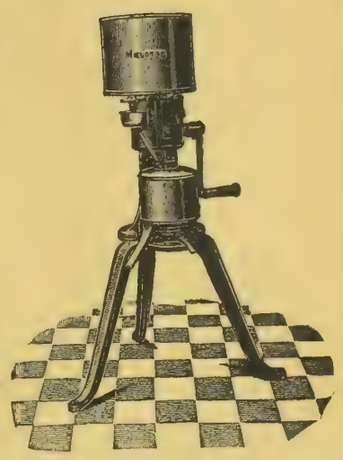

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The Acme Steel Ladder affords protection from fire in a greater degree than any other ladder.

The Acme Steel Ladder is made and sold in one foot lengths. These can be fastened in such a way as to make a ladder of any length perfectly rigid.

They can be moved anywhere on the roof, either from the top or bottom of it.

Send for information regarding our selling proposition.

The Acme Ladder is made in one foot links just the same as the old style ladder but with a very simple lock which is fully protected with patents. When the ladder is together the links are held rigid

If you are thinking of equipping your buildings with steel ladders and there is no agent in your locality and will write us we will have a man call on you.

The Acme Steel Ladder Co.,
SUSSEX, - - N. B.

the question. The organs of digestion like the other organs and muscles of the body, are developed best by constant use; the breeder who, through neglect, has not provided in some way for the emergencies that always come is short sighted. We all know that when a cow once shrinks in her milk how hard it is to get her back, and quite often it is impossible, even with the best of feeds, so it stands us in hand to provide in some way for these times and either have some soiling crops growing, or enough silage stored up to supplement the short pastures of summer, also to supply succulent feed for the winter use.

I believe there is such a thing as compelling success. Every breeder should have a complete understanding of his business and the individual needs of each animal, so that there is no time in the year when she may not have abundance of good rich juicy, foods best suited for milk production.

F. H. SCRIBNER.

The Science of Milking Cows Clean.

It is well known that the average milker gets less milk than he who does a thorough job; that incomplete milking means not only direct but indirect loss, not only an immediate lessening of the fat yield, but tends towards drying the cow. A Danish scientist has recently developed a special system of udder manipulation, a sort of massage of the mammary gland, as it were, which it is claimed augments the flow. The Hegelund method, as it is called, involves three manipulations, each thrice repeated or until no more milk is obtained. First, the pressure of the quarter on each side against each other thrice repeated, followed by removal of the milk; second, the pressure of the glands together on each side, the fore quarter being first manipulated and then the hind quarters, followed by removal of the milk; and third, the fore quarters are pressed between hand and body, with hands holding the teats loosely, then the hind quarters also, followed by milking.

Trials of the schemes made at the Wisconsin and New York stations afford a daily average increase per cow of a pound of milk and two ounces of butter. The after milk was very rich in fat, testing above 10 per cent. This after milking takes not to exceed five minutes' time, often only two or three minutes. The two ounces of butter may be held at a low estimate to be worth two cents. This would be a fair pay for two minutes work, 24 cents an hour and the skim milk thrown in. Not only is more milk and butter made, but the sections is stimulated and the lactation period prolonged. It may be remarked, however, that the differences in milk and butter yields between this method and careful stripping are not great. The Danish method emphasizes more perhaps than has hitherto been done, the actual and potential losses due to incomplete milking.—Prof. J. L. Hillis, Vermont Experimental Station.

Cost of Producing Milk.

After a year's observations with the dairy herd at Cornell University, Prof. H. H. Wing reached the following conclusions regarding the food cost of producing milk:

1st. With a fairly good herd, carefully fed and kept, milk can be produced for 65 cents a cwt,, and fat for sixteen cents a pound for the cost of food consumed.

2nd. That individuals of the same breed vary more widely in milk and butter production than do the breeds themselves.

3rd. The larger animals consumed less pounds of dry material per 1,000 pounds live weight a day than did the smaller animals.

4th. That in general the best yields of fat were obtained from cows that gave at least a fairly large flow of milk.

5th. In general, the cows consuming the most food produced both milk and fat at the lowest rate.

Easy Terms —ON— Dairy Farm.

50 acre farm near Shubenacadie. 15 acres cultivated, 10 in pasture and 25 acres in woods.

Soil is clay loam, free from stones and farm now cuts 10 tons of hay.

House is 24x23 and barn 24x30. School ½ mile. Small orchard.

Price $700.00

Two Hundred Dollars down and One Hundred Dollars per year.

Write for further particulars, mentioning farm No A-43.

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LIVE STOCK.

Butcher Hogs.

In the meat trade the term "Butcher Hogs" is commonly used to designate stock best suited for the fresh-meat trade, says Professor Wm. Deitrich in a recent discourse. They may be slaughtered and consumed at home, may be shipped and slaughtered in the East, may be slaughtered locally and the most consumed locally, and may be shipped East, or even to foreign countries. About 25 per cent. of the hogs coming to Chicago market annually are of this class.

They range in age, with good care and heavy feeding, from about six months for the light butchers to one year for the heavy butchers. With less intensive feeding the age will be greater for hogs of the various weights. The class of butcher hogs is subdivided into three subclasses, as follows:

Heavy butchers, 280 to 350 pounds.

Light butchers, 180 to 220 pounds.

Except in wight, these three subdivisions are practically the same. Hogs of this class are graded on the market as follows:

Hogs that will grade as prime butchers, either heavy, medium or light, must be perfect in quality, ideal in form and must show much evidence of ripeness in condition as well as maturity. The term "prime" in a general way means the best of the class, but in a more specific way in stockyard vernacular it has a meaning of its own. To grade as prime, a hog must show marked evidence of ripeness and maturity. The two must go hand in hand.

A hog may be mature without having been fed so as to show that bloom of condition that is necessary for a prime hog, or he may have been as well fed as possible and not be sufficiently mature; consequently he would not grade as prime. The high state of finish required for a hog of this grade is brought about by liberal grain feeding to maturity. Maturity in general means that condition at which development is complete.

In a more specific sense in the realm of swine feeding it may have an additional meaning, namely, that stage in the process of feeding where growth ceases under a given system of feeding and the animal takes on the form and appearance as well as the high state of finish of an ordinary well-fied mature animal. This may be at different ages and weights, thus giving us prime heavy hogs and prime, heavy, medium and light butchers, ranging in weight from 500 down to 200 pounds.

By quality is meant the characteristic that is indicated by a medium-sized, fine, clean-cut head without any surplus fat or wrinkles of skin; medium sized ears of fine texture; hair that is fine, straight and silky and lies close to the body; skin that is smooth, pliable and free from wrinkles; tail that is smooth, nicely tapering and not too large; bone that is fine, firm and free from undue coarseness at the joints as indicated in the legs; shoulders that in the case of boars have not too large development of shields; and by a symmetrical, smooth development throughout the entire body. In short, such points of refinement in form and features are characteristic of well-bred swine.

The form of a prime butcher hog is that of an ideal fat or lard hog, namely, broad back, wide and well-filled hams and shoulders, short, heavy neck, heavy jowls, and short legs. The hog must have these parts well developed, and at the same time be symmetrical, smooth and compact. Together with this form there must be an indication of quality, such as goes only with good breeding and good feeding.

Condition is a greater factor than either form or quality in determining the grade to which a fat hog belongs. By condition is meant the degree of fatness. Prime butcher hogs must be well covered with a thick layer of fat on the outside of the carcass, be well rounded out at the rump, thus making a socket in which the tail is set, be well filled out on the neck up to the face, have a broad, fat back with much fat on the sides and on the belly, and be well filled in the twist. Besides this, they must be free from flabbiness and show a firm, even and symmetrical development.

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ABSOLUTELY *FREE* POSTAGE PAID

If you are a Farmer, Stockman or Poultry Raiser and correctly answer, in your postal card or letter reply, the specified questions.

THIS IS THE LATEST SENSATION AND GREATEST TRIUMPH IN THE GREAT MOVING PICTURE ART.

It is a *New Invention* that you can carry in your pocket and show your friends instantly, day or night, either once or a hundred times, and without a machine, curtain or light. It is the first successful moving picture ever taken of a World Champion Horse in his wonderful burst of speed. The original film contains

2400 INSTANTANEOUS PICTURES OF DAN PATCH

and every picture shows the King of all Horse Creation as plainly as if you stood on the track and actually saw Dan Patch 1:55 in one of his thrilling speed exhibitions for a full mile. 2400 distinct moving pictures taken of Dan in one minute and fifty-five seconds means twenty-one pictures taken every second all of the way around the entire mile track from the back seat of a high power automobile. You can see Dan shake his head to let his driver know that he is ready for a supreme effort and then you can watch every movement of his legs as he flies through the air with his tremendous stride of 29 feet. You can see his thrilling finish as he strains every nerve to reach the wire, you can see his driver dismount and look at his watch while thousands of people crowd around, you can see his caretaker force his way through the crowd and throw a beautiful woolen blanket over Dan to prevent his catching cold and then you can follow him up the track before the madly cheering multitudes. As a study of horse motion it is better than the actual speed mile because you can see Dan right before you for every foot of the entire mile. When first shown to the public this marvellous picture caused people to stand up all over the theatre calling "Come on Dan"—"Come on Dan."

This remarkable moving picture is the most realistic and the most thrilling ever presented to the public.

We have taken a part of these 2400 wonderful and sensational pictures and made them into a *Newly Invented Moving Picture* that you can carry in your pocket and show to your friends at any time, day or night. It does not need a machine, it does not need a curtain and it does not need a light. It is all ready to show instantly either once or a hundred times and creates a sensation wherever shown.

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I will not mail this wonderful moving picture of Dan Patch 1:55 free unless you are a Farmer, Stockowner or Poultry Raiser and unless you correctly and honestly answer the three questions.

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In silver or stamps to pay postage, etc., on Moving Pictures. I will mail this wonderful Moving Picture of Dan Patch 1:55, the fastest harness horse the world has ever seen,—to you if you send me Twenty-five Cents in silver or stamps even if you do not own any stock or land. It costs about $2700.00 cash to have one of the original pictures taken and reproduced. ☞Write me to-day so that you will be sure to secure one before my supply is exhausted.

Address E. B. SAVAGE, Proprietor of
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Largest Stock Food Factories in the Entire World
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48

Care of Pregnant Ewes.

Many ewes and lambs are lost in the winter through crowding in the yards and pens. There are other disadvantages attached to this false economy in the winter care; perhaps it may be truly said want of care, for no other animals more than sheep call for the close oversight of the owner all the time, and none get less of it. Sheep require plenty of room on account of their natural habit of crowding. They also need to be kept in small apartments set off from the main sheds, so that one gang cannot trespass on the place of any other. This is especially important at this time, for crowding will very much interfere with the business of the rams. Fifty sheep are enough to be kept in one shed, and if this shed is made twice as long as wide and has a door at one end and two at the side opposite the feed rack, everything in the shed will be most convenient, safe entrance as well as exit being as convenient and safe as may be possible.

Ewes which have been served should be kept in such pens or sheds as this, and for additional shed room should be made, end to end, and in rows across a roomy lot. This will permit the sheep to go in where it is most convenient for them, and thus the crowding which is so injurious to in-lamb ewes will be avoided,

These sheds should be made on the outside of convenient yards, forming one side of the yard, and each large enough to accommodate a hundred ewes. They will need to be thirty feet wide sixty long, or even longer than this, which will be a great economy in the building of them. The front of the sheds inside the yards should be all doors, and these should not open in the usual way, but be made to slide on rollers, by which they are hung to the front of the building. This manner of building will completely prevent accidents, which otherwise will be happening continually through the crowding of the sheep going in or out of the sheds. It will really be necessary to move these doors, as they may be open all the time with convenience. But there may be unusually stormy winter weather at times, and then the sheep and the lambs especially may need protection, when the doors may be closed. These should be outside and be hung on rollers. Handles to move them should be put on. The rule should always be in all respects in managing sheep that all accidents should be profided for, and then there will be no losses to be regretted when this is too late.

Sal-Hepatica and Bloat.

I note what Mr. R. E. Hollis, of Shelbyville, Ky., has to say about a new cure for bloat in cattle: "Sal-Hepatica. A dose of two tablespoonfuls in a pint of water, given as soon as the bloat is discovered, will relieve in a few minutes. * * Have used it on some fifteen cows. I have noticed that the cows treated do not bloat again."

The above looks like an honest effort to mitigate the great evil of bloat in cattle, and is well worth a trial, for all of us dairymen have lost valuable cattle with this disease, which may have its origin in dyspepsia or indigestion; but we all want at least a temporary relief that we may first save the cow and then cure her.

The success of plain air in curing that dread disease called milk fever, and without any explanation ever being vouchsafed us, leads to hope that other and similarly simple remedies may come for equally serious troubles.—L. S. HARIN, in Jersey Bulletin.

The busiest and mightiest little thing that ever was made is Chamberlain's Stomach and Liver Tablets. They do the work whenever you require their aid. These tablets change weakness into strength, listlessness into energy, gloominess into joyousness. Their action is so gentle one don't realize they have taken a purgative. Sold by all dealers.

ABSORBINE

Will reduce inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises, Cure the Lameness and Stop pain from a Splint, Side Bone or Bone Spavin No blister, no hair gone. Horse can be used. Horse Book 2 D free. $2.00 a bottle at dealers or delivered.

ABSORBINE, JR., for mankind, $1. Reduces Strained Torn Ligaments, Enlarged glands, veins or muscles—heals ulcers—allays pain. Book Free.

W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

WANTED

Reliable Parties to do **Machine Knitting** for us at home. $7 to $10 per week easily earned. Wool, etc., furnished free. Distance no hindrance. For full particulars address

THE DOMINION KNITTING CO.,
Dept. W., ORILLIA, Ont.

SEALED TENDERS addressed to the undersigned, and endorsed "Tenders for Wharf at Cumming's Cove, N. B.," will be received at this office until 5.00 P. M., on Thursday, December 30, 1909, for the construction of a wharf at Cumming's Cove, Deer Island, Charlotte County, N. B.

Plans, specifications and forms of contract can be seen and forms of tender obtained at this Department and at the offices of E. T. P. Shewen, Esq., Resident Engineer, St. John, N. B., Geoffrey Stead, Esq., Resident Engineer, Chatham, N. B., and on application to the Postmaster at Cummings Cove, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, with their occupations and places of residences. In the case of firms, the actual signatures, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted check on a chartered bank, payable to the order of the Honourable the Minister of Public Works, for two thousand dollars ($2,000.00), which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

This Department does not bind itself to accept the lowest or any tender.

By order,
NAPOLEON TESSIER,
Secretary.

Department of Public Works,
Ottawa, December 1, 1909.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

Turn to the 'Phone

When you are in doubt as to selling possibilities

(Ring the market station. **Instantly** you are brought in direct contact with the people who can most aid you.)

When you think it is going to rain and the reaper has been very very busy all day

(Ring the weather man. **Instantly** you know whether you must take to the fields with all hands, or sit down and smoke the pipe of peace.)

When your barn is on fire

(Ring your nearest neighbor. **Instantly** you know that as fast as animals can travel, fellow tillers of the soil will come to your aid.)

Every day you will find your 'phone "a friend in deed" and it will prove to be a "payer" too.

DYNAMOS MOTORS THE NORTHERN ELECTRIC AND MFG CO. LIMITED WINNIPEG TELEPHONES ARC LAMPS MONTREAL TORONTO

Booklet 2816 is free for the asking. Tell us we ought to send it to you.

THE

Northern Electric & Mfg. Co., LIMITED.

Montreal, Toronto, Winnipeg, Vancouver, Regina.

DIP YOUR SHEEP

Stockmen and farmers who use the Cooper Dips have healthier animals—get more wool and better prices. More than half the cloth and flannel of the world is made of Cooper dipped wool. Tanks supplied at cost to all users of the Cooper Dips.

COOPER'S POWDER DIP

The leading sheep dip for 65 years. Used on 250 million sheep every year. Kills ticks, lice, nits and eggs in one dipping. Does not stain the wool, but increases the yield and improves the quality.

Prices 25 gal. pkt. 50c., 100 gal. pkt. $2.00.

COOPER'S FLUID DIP

for all animals. A highly concentrated, non-poisonous fluid dip of marvellous strength. Mixes readily with cold water, whether hard, brackish, or salty. The only pure liquid dip—no sediment. Goes farther than Coal Tar dips and, therefore, cheaper. Positive remedy for scab, mange, ticks, lice, ringworm, eczema, sores, bites, stings, etc. One gallon makes 200 gallons for general dipping, or 300 gallons for disinfecting.

Price—Qt. can 75c. 1 gal. can $2.00, 5 gal. can $8.50.

COOPER'S WORM TABLETS

A sure remedy for intestinal worms in Horses, Sheep, Cattle and Hogs. These tablets offer the great advantage of correct doses and certain results. Dose—one tablet for lamb or shoat, two for sheep or hogs, three for horses and cattle.

Price—10 tablets 20c. postpaid, box of tablets, 200, $1.00, postpaid.

COOPER'S "LAVENE"

The most effective skin dressing for Horses, Cattle and Dogs. Cures worst cases of Mange and Ringworm at one dressing. Searches the skin and attacks the disease at its root. Improves the coat and renders hair soft and glossy. Is used by many of the best breeders in preparing animals for show.

Price Qt. can $1.00. Gal. can $3.00. CANADIAN DRUG CO., LTD., ST. JOHN, N. B.

Feeding Value of Separated Milk.

In all dairying countries pigs are considered an important ajunct in connection with the dairy, and as a general rule, it may be taken that feeding pigs with separated milk is about as profitable as any other legitimate method of disposing of this by-product of the dairy. Unfortunately the same ideas prevail in respect to the wholesomeness of separated milk for pigs as are general in regard to calves fed upon this substance. We have, however, sufficient evidence that, as a food for pigs, separated milk may be extremely useful.

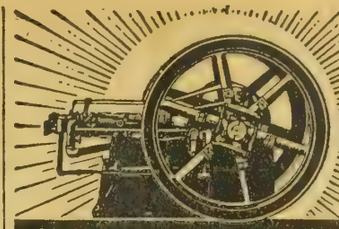
Separated milk alone would be sufficient, not only to keep pigs alive, but it will, if given in sufficient quantities cause considerable increase in the fat and lean meats of pigs so fed. Rothampstead experiments have shown some favorable evidence in this respect. They bear upon the question of fat in animals fed upon nitrogenous or flesh forming foods. In these experiments the increase in body weight ranged from fifty-one to sixty-eight per cent., the feeding being conducted eight weeks, and the total increase in fat consisting from 60 to 80 per cent. From the nature of the food the proportion as leaks on the farm must possibly have been derived from the ready-formed fat ingested, even supposing that the whole of what was supplied had been assimilated, was so small as to leave no doubt that a very large proportion must have originated from some other source. According to the figures given, the proportion of fat which must have so originated, ranged from about two-thirds to eight-ninths of the total amount stored up. Thus it was shown that fat must have been formed from food ingested. The next question for solution was whether the fat produced emanated from the nitrogenous or the non-nitrogenous elements of the food or both.

In these experiments the relative proportion of the nitrogenous and non-nitrogenous parts of the food as given to the several pigs was purposely varied. From the results attained it appeared that there was no material difference in the amount of fat produced, although, if fat were capable of originating only from carbohydrates, it would be reasonable to expect that on diminishing this supply, as in replacing a portion of them by nitrogenous matters, the amount of fat developed would have been less. This evidence tends to encourage the impression that the component parts of food have but small influence upon the proportion of fat and lean produced in the animal.

It has also been proved from experiments of feeding pigs on skimmed milk alone, from which all the fat has been abstracted, that there was a decided increase in the weight of the animal and the increase included a fair proportion of fat.

It must not be concluded as absolutely certain that the chemical composition of food has no influence on the quality of meat produced; in other words, that carbohydrates will produce only fat and that nitrogenous food will produce only lean meat. Carefully conducted experiments, in some of the American Experiment Stations, have shown that fat and lean meat are directly influenced by the composition of the food given the pigs, and that, when a nitrogenous food is given flesh of lean quality is formed, and that by the feeding of fats, starches, or other of the carbohydrate groups, the proportion of fat in the pig is increased.

During late years the bacon industry of Denmark has increased enormously in importance, and the bacon received from that country is most excellent. Large quantities of separated milk are used for pig feeding in Denmark. In fact, the making of skim milk cheese, which was at one time an important industry in Denmark, has given away before the system of using separated milk for pig feeding.



AN IHC GASOLINE ENGINE THE BEST HIRED MAN

THERE'S no doubt about it. Thousands of farmers have proved and are proving every day that one of the simple, dependable I H C gasoline engines makes and saves more money for them than the best hired man they can get.

Don't let the up-to-date farming ways get away from you.

You can make your I H C engine work when and where and as long as you please. It is something you can own. It is all yours. You don't have to talk to it about getting up early or argue about quitting time. It is always ready and willing—just as well pump a tank full of water after dark as in the daytime. It is ready to start the saw, pump or any other machine going before daylight, if you are.

If you have a full day's work for it at grinding, you will get more out of it than you would get out of a half dozen hired men. It's just the same with all kinds of work. Your I H C gasoline engine will work with all your machines—will push them—keep them going steadily—make them really valuable to you. You have nothing to pay it in wages; no fear that it is growing tired and thinking of quitting you. Its only requirement for its faithful service all day—every day or night—is a small amount of oil and gasoline.

Why not let an I H C gasoline engine be your hired man? There are a dozen ways you can use it. You will have it going at some kind of work pretty nearly every day. Attach it to a power-house and, whenever you do start it going, you know you will get at least as much work out of it as you would get out of two or three men.

The I H C gasoline engine is the latest and one of the greatest real aids to the farmer. You ought to have one for your steady hired man. Thousands are going out on the farms. There are many styles and sizes, from 1 to 25-horse power—an engine for every section and every problem, for all farm uses—vertical and horizontal (both stationary and portable) engines on skids; sawing, pumping and spraying outfits. It also includes gasoline tractors—first-prize-gold-medal winners—the best all-'round farm tractors.

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are as effectually imprisoned as the larger ones, for we make "Maritime" Wire Fence with spaces too small for the little, wee piggies to squeeze through.

The absolute regularity of the weaving, the stiffness and springiness of the English high-carbon, hard-drawn steel wire, the remarkable gripping-strength of our lock, make "Maritime" Wire Fence a decidedly stronger fence—one that you ought to know more about.

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R. D. EVANS, Discoverer of the famous EVANS' CANCER CURE desires all who suffer with Cancer to write him. Two days treatment will cure external or internal Cancer. Write R. D. EVANS, BRANDON, Manitoba, Canada.

THE BEST LINIMENT
OR PAIN KILLER FOR THE HUMAN BODY
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Caustic Balsam
IT HAS NO EQUAL
For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons Exterior Cancers, Boils Corns and Bunions CAUSTIC BALSAM has no equal as a Liniment.
A Perfectly Safe and Reliable Remedy for Sore Throat Chest Cold Backache Neuralgia Sprains Strains Lumbago Diphtheria Sore Lungs Rheumatism and all Stiff Joints
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Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.
Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

THE HORSE.

Care of Farm Horses.

STABLES FOR HORSES.

Naturally, the first consideration will be the stables. Any horse stable, to be a good one, must have several peculiarities, or several distinct features. It must, in the first place, in this climate, where we have to contend with so much cold weather, be economical of space, for we do not wish the horses to have to warm up too large a space. In the second place, it must be convenient, for we have to consider the amount of work that is necessary in looking after horses. We find that the care of the horse constitutes about one-fifth of the cost of keeping the animal, therefore, the more economical we are of space, and the more conveniently things are arranged, the less will be the total cost of keeping the horses. In the next place we must look after the comfort of our animals. If we are going to keep them in good health, comfort is essential, and it will economize not only in doctors' bills, but also in the amount of feed. There is a great deal of difference in healthfulness of different stables. The harness room and feed rooms should be boarded off tightly to the ceiling in order to save being heated by the horses. In the case of the box stall, the partitions should go only part of the way to the ceiling because this would be too large a space for one horse to heat alone.

THE FLOOR.

We have, from observation, and partly from experience, found that the best kind of a floor for the horse to stand on is a wooden one, and under that, if we are going to ensure sanitary conditions, cement is needed. Planks under a horse are expensive, but it is much easier on a horse's legs, and where they have to stand for any considerable amount of time, as for instance on Sundays or holidays, there is always more or less danger of their legs going wrong if they have a hard floor to stand on. In laying the cement in the passage, it will be necessary to make it as rough as possible. I have seen cement floors that were as smooth, or almost as smooth, as glass, and on which the horses were continually slipping. That kind of floor is a very serious menace to soundness, particularly in this country, where there is sure to be more or less ice at certain times of the year. It is also rather more dangerous if the floor should happen to get wet, as it is almost certain to do at some time. Just behind the stalls, which, by the way, I would like to have about six feet wide for an average sized horse—a good sized horse, I had better say—there should be a shallow gutter, not more than a couple of inches deep, just deep enough to gather the urine.

The feed room should be located as convenient to the door as possible, and should have good light. You want bins for four or five kinds of grain—oats, bran, mixed meals and shorts. You might also say for small amounts of different kinds of feeds for supplementing the regular rations. To have only one or two places for meal is to give a whole lot of trouble. Then you want a considerable space wherein to mix the feed if it is desired to use cut feed and mix the meal with it. The harness room should have a stove in it to keep the place warm when it is necessary to clean the harness or repair the same. It should be provided with a single window, should have two lines of good, strong hooks on either side, and a few shelves whereon to store materials to be used in looking after the harness. Right over the feed room I would suggest having a granary.

LIGHT IN THE HORSE STABLE.

Now, another consideration is light in the stable. An abundance of light is absolutely necessary if you are going to have a sanitary stable. It is preventive of disease, it is inspiring and cheerful, it keeps the horses in much better spirits and shape for work when they go out, and it is conducive to cleanliness. If you go into a dark stable the chances are there will be lots of spots where there will be small heaps of refuse, which get wet by some means or other. There is fermentation going on, and the air is almost certain to be bad. Therefore, light is not only one of the most powerful factors that go to insure cleanliness, but also one of the most healthful factors in a stable. And the light should come, if there is no feed passage, through a small window in front of each horse, high up and protected from the horse by means of iron rods. There should also be light coming in at either end, or at least at one end, and light in either side. The question of light is one which does not receive nearly sufficient attention, I find. Most farmers are satisfied to have a little bit of light windows, about a foot by two feet, every here and there in the side wall, so that the place has always a sort of subdued light, very suitable for funerals, but certainly not conducive to health. I think these are points which ought to receive a good deal more attention than we give them in our stables, whether horse stables or cow stables for that matter. Then, again, the windows should be sliding or hinged, so that they may be opened in summer or whenever it is necessary to have a current of air in the stable to cool the place.

Scientific Feeding of Horses.

The Paris "Compagnie Generale des Voitures," or General Cab Company, owns nearly 12,000 horses, and it is, therefore, essential that the methods of feeding this large number should be most carefully thought out so as to combine the greatest economy with the production of the maximum amount of power and endurance in the animals.

To obtain reliable guidance a research department was established some time ago, and it is its duty to investigate the difficult problems connected with this important matter.

The various food materials are bought in large quantities, and for the most part come from abroad; at the present time they consist chiefly of oats from the Danube, although a portion are purchased in France, peas from the East Indies, American maize, locust beans from Algiers, brewers grains, molasses fodder from the beet sugar factories, and a compound special cake (granule) prepared by the company.

Two points are most rigidly adhered to:—

1. All the materials are thoroughly cleaned by special machinery to remove any foreign substances which might interfere with the digestive process and are sometimes of an injurious nature.

2. The different materials before being given to the horses are subjected to a most thorough inter-mixture, as numerous experiments have proved that by this process the food is more completely assimilated.

The special cake is prepared from suitable materials selected according to the relative cheapness of the food-units in the different materials offering on the market at the time of purchase; thus, among other things, bran, rice-offal, brewers' grains, are bought, and then mixed according to a calculation of the food-units, the following analysis in the prepared cake being aimed at:—Albuminoids 21.7 per cent, fat 5, carbohydrates 20 to 30, ash about 6 per cent, including phosphates 1 to 2, and lime about 1-4 per cent. Hay and horsebeans are not employed at present, being too dear.

RATIONS.

The daily rations differ for "resting" and "working" horses. On resting days no oats are given, and the ration consists of 6.17 lb. chopped oat straw, 4.62 lb. maize, 2.64 lb. crushed peas, 2.64 lb. locust beans, 2.20 lb. brewers' grains, and 1.10 lb. special cake, altogether 19.47 lb. This mixture is given to the animals in four equal parts.

For "working" horses; before leaving the stall a fourth portion of the above ration is given; in the course of the day, as convenient, a ration made up of 7-7 lb. oats and 1-10 lb. crushed peas, and after return to the stall a third ration of 6-6 lb. molasses straw (60 per cent.) and 1-76 maize, making altogether in a working day 22 lb.

BEDDING.

The atmosphere in the stables is kept quite sweet, which is due to the exclusive use of peatmoss bedding. The horses stand on a thick mattress of this material, and the parts soaked with urine are daily replaced. About 17 lb. per horse per week are thus renovated. The manure finds a ready sale in the neighborhood.

DISEASE.

The company takes every precaution to protect their animals from infectious diseases. Freshly bought horses are inoculated before being brought to the stables. Isolated stalls are available for horses suffering from disease or accident.

FEEDING SYSTEM.

The system of feeding is the result of a long series of investigations and trials by the experimental department. The trials were conducted with thirty horses chosen for their average condition and capacities for a long period under careful supervision.

These trials led to the important and interesting conclusion that the previous nutritive ratio should be abandoned. For a resting horse it was in the proportion of 1 to 5 or 6 and for a working horse 1 to 4 or 5; but the experiments showed that the proportion of carbohydrates could be increased with advantage to the ratio of 1 to 8; 1 to 12, and indeed, 1 to 20 with the liberal use of sugar.

It was demonstrated that the value of the ration depended not so much on the percentage of albuminoids as on the total of disgestible matter which the ration contained. This has led to a great economy in the use of the expensive nitrogenous foods, and having been now tested on a staff of 12,000 horses it may be assumed to be a conclusion verified by experience.

DINNER BELL MUSIC.

The music of the dinner-bell is always welcome to the healthy man or women—alike to the working man or woman who eats a plain meal at noonday, or to people of easier lives who enjoy a rich dinner in the evening. But to the Dyspeptic there is no music in the dinner-bell—it calls him to a trial for which he knows he is unfit. No one can enjoy a meal, or get nourishment and strength from it, knowing that pain and distress will follow after. The true course, even for healthy people, is to help the digestive system, from time to time, with that excellent tonic medicine, Mother Siegel's Syrup.

Mr. Michael Bureau, of Stanham, Quebec County, P.Q., writes: "For some time I suffered from Indigestion. I had headaches which made life a misery. I could not sleep at night and after eating I felt a sensation of fulness and pains, with heart palpitation. I took no medicine for this illness except Mother Seigel's Syrup and was cured when I had used one bottle of it."

EASY
WASHING
—quick washing.
That's the kind
of washing you do
with the
"New Century"
Washing Machine
Ball-bearing means easy running.
Powerful Spiral Springs that reverse the motion, make quick work and little effort.
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Write for free booklet.
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HAMILTON, ONT. 36

Our 60 Years' Experience
and continued success is a guarantee to You of Good Qual y and Fair Dealing.

We are offering for the next 30 days our No. 15 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. If not satisfied we will refund the amount.

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leather blinds.
Breast Collar—Single strap.
Traces—1¼ wide; heavy single strap lined at both ends; sewed to breast collar.
Saddle—2¾ in., full padded; patent leather; swell skirts.
Breeching—Well made, with flaxseed stuffed cropper.
Reins—Cut from good leather.

H. HORTON & SON., Ltd.,
& 11 Market Square, St. John, N. B

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Does Your Granite Dish or Hot Water Bag Leak?
use MENDETS
They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivet. Anyone can use them; fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES 25c. POSTPAID. Agents wanted.
Collette Mfg. Co., Dept. R. Collingwood, Ont.

Chamberlain's Cough Remedy never disappoints those who use it for obstinate coughs, colds and irritations of the throat and lungs. It stands unrivalled as a remedy for all throat and lung disease. Sold by all dealers.

POULTRY.

Maritime Poultry Men in Annual Session.

The annual meeting of the Maritime Poultry Association was held in the Board Room, Winter Fair Building, Amherst, N. S., at 10 a. m. of Wednesday, December 8th. About fifty poultrymen were present and Joseph P. Landry, president of the Association occupied the chair. The relative standing of the Association in connection with the Maritime Stock Breeders' Association was read by the President, who also gave an outline of the courtesy extended to the executive of the Poultry Association by the Stock Breeders' Association and how the requests of the poultry men had been granted in nearly every case. Rev. J. B. Daggett, vice president for New Brunswick, said that poultry keeping was receiving a great deal of attention in his province. Three special poultry shows had been held in New Brunswick last winter; the number will be increased this winter. The watch-word all along the line seemed to be "more and better poultry." He would like the Association to keep advocating for lower express rates on poultry. He also spoke very highly of the treatment he had always received from fellow poultry men at the Winter Fair and regretted that matters over which he had no control prevented his Company from showing this year. He had been sowing the seed of practical, profitable poultry keeping at various institute meetings he had conducted during the past year and he trusted fruit would result from his efforts.

L. H. D. Foster, vice president for Prince Edward Island, gave a glowing account of the increasing interest in poultry in the Island Province. Their Provincal Poultry Association was rapidly gaining in membership and had held a successful show last winter. They were looking forward to a large show in January. He referred to the difficulty experienced by P. E. I. poultry men in getting their birds to Amherst on Saturday preceeding the fair and would like to see the rule ammended so that they might be allowed to enter their birds on Monday afternoon or Tuesday morning.

I. C. Craig, vice president for Nova Scotia said he was glad the President had obtained a statement showing the standing of the Association with the Maritime Stock Breeders' Association. He had no desire to see the Poultry Association hold a special show, but wished to work with the M. S. B. A. The Secretary Treasurer's report showed $68.00 receipts and an expenditure of $36.95 leaving a cash balance of $31.05.

The Prize List Committee's report was given by Messrs. Wm. Robertson and Seth Jones, members of the committee. They were well pleased with the manner in which they had been treated by the executive of the Maritime Stock Breeders' Association, who had acceded to nearly all their requests. There was no report from the committee appointed last year to revise certain classes in the constitution and by-laws and as the matter which led up to a necessary revision had been satisfactorily settled the committee was discharged as further revision is unnecessary.

Mr. F. C. Elford, judge of the Utility classes was present and expressed much satisfaction at the quality he had found in the class he had judged. He could see a closer conformation to type than in previous years and said that the show as a whole was a credit to Maritime poultry men. He had found cases where splendid specimens were accompanied by very poor specimens in making up the utility pairs and advised that in future more care be taken by the exhibitors in making the selections, as very often a coop containing one of the best birds in the show would have to go down in the list of awards owing to the fact that the other bird in the coop was not a good specimen. The dressed poultry classes were not as well filled as he would like. He spoke of the profits from practical poultry keeping. He advised the producers to go after the best market with their birds. The Montreal dealers would like to get our goods, but owing to lack of organization among the producers it was very difficult to get business satisfactorily done. He outlined the working of the Poultry Producer's Association and intimated that he would like to see branches of that Association in all parts of the Maritime Provinces. Then the best markets could be reached and the middleman could be dispensed with both in selling produce and in the buying of feeds.

Mr. Smith, who judged the open classes endorsed the remarks made by Mr. Elford and advised that poultry men combine in shipping their poultry produce to the best markets until the shortage on the home market will be sufficiently appreciated to cause a rise in prices. The exhibit of birds in the classes he had judged was excellent and compared very favorably with shows of equal dimensions in the United States.

A standing vote of thanks was tendered to Messrs Elford and Smith for their satisfactory work and kindly interest in the work of the Association.

The election of officers, resulted as follows: President, J. P. Landry, Truro. N. S.; Vice Presidents, I. C. Craig, Amherst, N. S., Percy Gunn, Sussex, N. B., L. H. D. Foster, Marahfield, P. E. I. Directors:—Wm. Robinson, Amherst, N. S.; Dr. Webster, Pictou, N. S.; Rev. J. B. Daggett, Hartland, N. B.; Walter McMonagle, Sussex, N. B.; C. P. Thorne, Charlottetown, P. E. I.; H. H. Howard, York, P. E. I. Prize list Committee, Seth Jones, Sussex, N. B., Mr. Simpson and Wm. Robinson, Amherst, N. S., and George Thompson, Halifax, N. S. Secretary-Treasurer, M. A. McLeod. Sussex, N. B.

Poultry Show at Winter Fair.

It was a pleasure to note the grand improvement in the Winter Fair building, the poultry room and in the cooping of the best exhibit of live poultry ever brought together in the Maritime Provinces. This year's show easily surpassed any in the past in quality and general excellency of all classes in this department.

The Winter Fair is the society event in animal husbandry in eastern Canada. The show was well handled in all its branches. The superintending and judging left nothing to be desired.

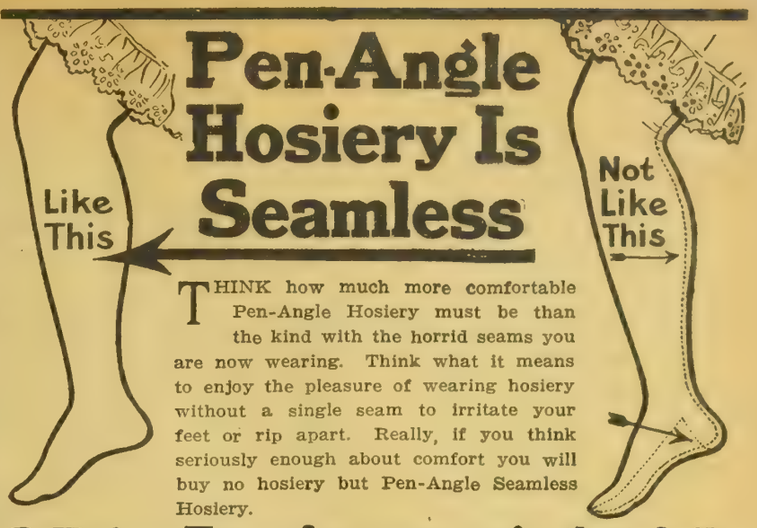
Mr. J. P. Landry, of Truro, superintended the show in the most efficient manner. He was most courteous to the exhibitors and most thorough and painstaking in his management of the exhibits, Joe. gives all the boys a square deal.

Mr. A. C. Smith, Waltham, Mass., officiated as judge in the open class for the first time at this fair and his work was most thorough and impartial to all. None of his awards were questioned. He will be sure of a warm welcome again to our provinces when he comes on similiar missions.

Mr. E. C. Elfoyd, of McDonald College, Quebec, placed the awards again this year on all the utility and dressed poultry. He is one of the most popular judges and always gives the best of satisfaction to both management and exhibitors. Of course the greatest interest of the show was created in Barred P. Rock ally, competition here was "red hot" all along the line, the judge had his work cut out for him and it took several heats for him to decide the winners. 7 cocks, 10 hens, 28 cockerels and 32 pullets made this the best class ever brought together in eastern Canada. After all the winners were picked out there still remained enough quality to make a better show in Barred Rocks than we ever saw at Amherst up to a year ago.

The 1st, 2nd and 3rd, were straping, fine, big, massive fellows, first excelled in color under barring and condition. Hens were close, but the first prize by

(continued on page 146.)



Pen-Angle Hosiery Is Seamless

THINK how much more comfortable Pen-Angle Hosiery must be than the kind with the horrid seams you are now wearing. Think what it means to enjoy the pleasure of wearing hosiery without a single seam to irritate your feet or rip apart. Really, if you think seriously enough about comfort you will buy no hosiery but Pen-Angle Seamless Hosiery.

2 Pairs Free for any pair that fails

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to wear longer than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs free of charge.

Read that guarantee over again carefully, for we want to impress it indelibly upon your mind, because it is the most liberal—the fairest and squarest—hosiery guarantee given anywhere.

It proves our unlimited confidence in Pen-Angle Hosiery. We must be sure of their quality to back them up so strongly.

Exclusive Process

The reason for Pen-Angle superiority is due to the exceptional quality of the cashmere and cotton yarns we use. And because we knit them on Penmans' exclusive machines. We have the sole rights to use these machines in Canada.

They form-knit the hosiery to fit the form of the leg, ankle and foot perfectly without a single seam anywhere.

Reinforced Feet

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

You see, these wonderful machines increase the wear-resistance, and at the same time make Pen-Angle Hosiery more comfortable—your ideal hosiery. So be sure and get Pen-Angle Seamless Hosiery—the hosiery with the DOUBLE guarantee.

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns. 2-ply leg. 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black, light and dark tan, champaigne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, $1.00; 6 pairs, $1.50

No. 1175.—Mercerized. Same colors as 1720. Box of 3 pairs, $1.00; 6 pairs, $2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

No. 330. — "Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, $1.00; 6 pairs, $2.00.

Instructions

If your dealer cannot supply you, state number, size and color of hosiery desired, and enclose price, and we will fill your order postpaid. If not sure of size of hosiery, send size of shoe worn. Remember, we will fill no order for less than one box and only one size in a box.

Catalog Free

If you want something different than the styles and shades listed send for handsome free catalog which shows an extensive line in colors. 43

Pen-Angle Hosiery

WARRANTED HIGH PENMANS GRADE HOSIERY

PENMANS, LIMITED, DEPT. PARIS, CANADA

THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage. Address all communications to EVANGELINE, Port Williams Station, N. S

A Song of Christmas.

Chant me a rhyme of Christmas—
Sing me a jovial song,—
And though it is filled with laughter,
Let it be pure and strong

Sing of the hearts brimmed over
With the story of the day—
Of the echo of childish voices
That will not die away.

Of the blare of the tasseled bugle,
And the timeless clatter and beat
Of the drums that throb to muster
Squadrons of scampering feet.

But, O, let your voice fall fainter,
Till, blent with a minor tone,
You temper your song with the beauty
Of the pity Christ hath shown.

And sing one verse for the voiceless;
And yet, ere the song be done,
A verse for the ears that hear not
And a verse for the sightless one.

For though it be time for singing
A merry Christmas glee,
Let a low, sweet voice of pathos
Run through the melody.

—JAMES WHITCOMB RILEY.

Miss Slimmens's Boarding-House.

(Continued from last issue.)

Dora, there's a box ! Come and help me get it open; but I know what's in it, well enough. It's that splendid plated set we were looking at the other day. No matter how I knew it. It was only last evening, at the table, when I broke my china teapot, some of the gentlemen spoke of making me a present; and here it's only ten o'clock of the next morning, and it's come ! There's a note along with it; I'll read it while Caturah's gone to get the hammer. My boarders are a nice set of young gentlemen. They can take a hint of the most delicate nature, without any necessity for a person's speaking out. What a plain, handsome handwriting ! let's see what it says :—

DEAR SLIMMENS : Do not consider us of-fish-us in making you the slight present which you will find in the accompanying box. It is the first course we have taken to acknowledge your desserts. We cannot express our scents of obligation in any more forcible manner than by selecting this beautiful specimen of table-service, which we hope to see in the future (as it has been in the past) the daily ornament of your board. With emotions greater than we can express, and the strongest remembrances of the past, for your ef-fish-ent labors in our behalf, we beg of you to accept the inclosed. We all feel that you are very near to us, and very dear ! May you live a thousand years, and never be any older than you are at present. You have been weighed in the scales, and not found wanting.

Tenderly yours, etc.,
BOARDERS.

Isn't it queer ? just like my young gentlemen ! can't do the handsomest thing, without their joke about it. Caturah ! come along with that hammer, will you ? Now, then, the lid's off ! How nice it's all done up in cotton and tissue-paper ! We're coming to them now. This must be the spout of the teapot. But my, how funny it smells !

A codfish, and nothing else ! Was ever a poor, unprotected female so put upon as I am ? It's not enough that I must wear my feet off waiting on a parcel of sassy, provoking fellows, but they must up and ridicule me to my face, and insult me in this diabolical manner. It's a burning disgrace to them ! I've a notion to dismiss every single one of 'em this very noon, without a mouthful of dinner. But they'll only go off to the public-house and have a great time, and laugh at me. Besides, I can't afford it. That Hopkins hasn't come on from Newport yet, and until I'm married to somebody, I've got to keep boarders for a living. But they'll repent it, I can tell 'em that. They haven't made me mad for nothing. Here, Caturah ! take this fish and have it boiled for dinner. Don't you put another solitary thing upon the table except the dishes. Lay the table in good style, and put the fish in the middle of it. I'll have something sent to your room for your dinner, Dora; so you needn't come down. We'll see about this impertinence !

It's a beautiful day, gentlemen, beautiful. Quite gorgeous for October. This cool weather gives us a fine appetite. Mr Smith, I'll trouble you to carve. Won't you be helped to more, Mr. Johnson ? Not that I wish to be officious, but I know you are particularly fond of codfish. Don't be backward, Mr. Bethuen, don't. No, thank you, not a bit; I'd rather talk than eat; I've had my dinner. You don't seem in very good spirits, the most of you. Have you heard of the death of any of your acquaintance ? Mr. Smith, give Mr. Blinks some more of the cod. I was hoping you'd all feel as well as I do today. What ! you aren't done ? You haven't half finished your dinners. There be fish enough left to pick up for supper. Would you relish it picked up for supper, gentlemen ? You shall have it, then, by all means. I love to please my boarders, O yes, above all things !

Goodness gracious ! can I believe my eyes ? An entire new tea-set, just as handsome as the solid silver, the very one I had picked out in my mind's eye, standing on my own table, before my own eyes, with sugar in the bowl and cream in the jug, and tea in the pot, and all ! What does this mean, gentlemen ? Another note in the sugar-bowl. Well ! well ! I declare I'm so agitated with pleasure and surprise that I can hardly peruse it.

BELOVED SLIMMENS : We acknowledge the corn—or, rather, the cod. At our second dinner, at Cronsis Hotel, today, we unanimously concluded, over the last cup of coffee, to take up a collection for the purpose of expressing our feelings for the lady who has so long and so ably ministered to our needs. Bury the remains of past repasts. Be good to us. Give us more sugar in our tea. Cast they bread (and cake) upon the waters, and after many days it shall return to thee (on a silver plate.) Please put a little "gunpowder" in the new teapot. Do not be afraid; it will not go off of itself. Milk is guaranteed not to injure the inside of the milk-jug. And ever, when you think of eggs, remember muffins, and do not forget the weakness of your confiding

BOARDERS.

CHAPTER XXII.

DORA'S BABY.

That ever I should have had such a thing happen in my house ! Me, a respectable single woman, with a house full of young men and gentlemen boarders, and such goings-on in it ! It's shameful, perfectly shameful ! She ought to have known better than to have gone and got married. What did she go and get married for ? Didn't she know it would come to this ? Why didn't she firmly refuse all solicitations as I have ? Thank goodness, it isn't me ! But if it isn't me, it's Dora, and that's about as bad. She's been a good little thing, Dora has; she's put up with all my sayings and doings like an angel. I didn't know I did think so much of her. O dear ! I wonder how she's getting along ! I've a mind to go to the door and ask. But I won't; it's good enough for her ? What did she get married for ? that's the question. But they'll all do it—yes, everyone of them —just as quick as they are asked! There hasn't a girl in this town held out till she was thirty, but myself.

I've tangled this silk, and broke my needle, and spilled my thimble. Pshaw! I can't sew; I'm too nervous. What's that ? Oh, it's you, is it, Mr. Little ? You needn't come a sneaking into my room for pity. I despise you. Oh, she'll die, I know she will, and you'll be responsible for her death. I've had a presentiment all the time she would die. There, you needn't groan; I didn't mean to make you any more miserable than you are, poor fellow ! But I had an awful dream last week; I dreamed about white roses, and they're a sure sign of death in the family, especially at this season of the year. Flowers out of season purtend death, and white roses of all others ! Still, I don't wish to scare you. Maybe she'll get along. I wonder what the boarders will say when they hear the news. I got to the dinner-table as cool as a cucumber, and didn't let a soul know what was going on in the house. It'll be time enough when they hear it squall; yes, George, squall ! Don't think you're going to have a cherub with wings, that'll laugh and clap its hands the first day. Little babies are the ugliest things in creation. Red-faced, red-armed, red-necked, screaming, kicking, colicky, squirming—bah ! And everybody will tell you it's the very picture of its father. If you ever had any vanity—as all men have oceans of it, you'll get it took down on this occasion. The picture of its father. O yes, the very picture ! Flat-nosed, blank-eyed, crimson, squalling little bundle, the very picture of its handsome papa ! ha! ha! Oh, you're in a nice scrape, ain't you? and it's good enough for—Mercy, Susan, how you frighten a person! I thought you'd come to say the nurse had sent word Dora was dead, or dying, or something, and here it's only to bother me about tea. Do get tea for once in your life, yourself, without asking any questions. Don't you see I'm in a state of mind boarding on detraction, with boarding married people ? Shut the door.

Do sit down, George, and don't make such a fool of yourself, walking around like a hyena in a cage. There ! what on earth was that ? Nothing but that pesky cat, got in the house again. I thought it was a baby crying. I hope this circumstance will be sufficient to warn me against ever getting my foot caught in the trap. What the female sex ever marry for is a mystery. I don't aspire to be considered a strong-minded woman, but I trust I shall ever have strength of mind sufficient to enable me to resist the inducements of a husband and children. You'll repent this day, young gentleman, the worst of any in your life. Instid of your quiet evenings, sitting reading to Dora, or playing backgammon, or singing, it'll be catnip tea and colic. All the peace you'll get for the next six months you may put in my thimble here, and it won't run over. It's good enough for you ! My best wish is that you won't have two hours' consecutory sleep in a year.

Do clear out and go in the parlor, if you can't keep still a minute. I never saw a man act so much like a fool. But I don't wonder you look like a robber or a felony. I suppose if Dora dies you'll console yourself with—Bless me ! that was a genuine baby's squall ! Just hear the little panther. Ha ! ha ! what makes you so red in the face, George ! you've changed color all of a sudden. Don't you wish you knew whether it was a boy or a girl ? Run up stairs and ascertain, you goose ?

Ha ! ha ! he went up like a rocket. Well, if I ever thought George Little would be flustered by anything! These men are too ridiculous for anything. I must go and see whether Dora's dead or alive, and whether it's a girl or a boy

Ha! ha! gentlemen, you needn't expect Mr. Little's company at the tea-table. I don't suppose he could swallow a mouthful before to-morrow morning. He don't feel the necessity of vittals, O no! he's living on his vanity at present. A boy, of course! a fine, plump, healthy boy. But, he! he! gentlemen, really I beg your pardon for mentioning what has occurred. But as Dora has been like a twin sister to me, I couldn't turn her out of the house in co sequence of her getting married. I don't approve of marriages, the reason I make it a rule to take only single gentlemen to board. I'm single myself, and ever intend to remain singular. Nothing in the world could tempt me to do as Dora's done—get married, and have—but, bless me! what am I talking about? I blush to think it. Gentlemen, excuse my overwhelming confusion.

Seventeen apprentices have I had, in all, since I commenced the millinery business for myself, seventeen, and every one of them wives and mothers, even to Dora, the last and youngest of the lot ! I declare I do feel lonesome, setting here by myself, reflecting on my fate and that little pink innocent asleep in its crib—it makes me feel dreadful lonesome. I could cry this minute. It's no fault of mine, neither; if ever a woman tried faithfully to find a pardner, it's been Alvira Slimmens. I haven't left a thing undone that could be done to bring about a different state. I've toiled faithfully from one year's end to another. I've made money, and I've spared no expense to render myself attracting; yet here I am, setting solitary in my boarding-house, my boarders wrapped in the arms of Orpheus, and

Your foods are in two classes: Foods that please you by their taste, and foods that you depend on because of what they do for you. Quaker Oats has all the good qualities of both classes.

Cowan's "Perfection" Cocoa

Is absolutely pure, strong and healthful. Delightful in flavor, nourishing, economical. Cocoa should be boiled three or four minutes in either milk or water to produce best results.

The Cowan Co. Limited, Toronto. 86

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, olind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment ; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Dora's baby asleep in its crib, with rose-colored curtains around it. I don't wonder George is proud of a boy like that. Somehow, when I went into the room and saw Dora lying there, looking so sweet and pale, and pretty, and her husband so triumphant, and took that little bundle of flannel and lace in my arms, instead of being disgusted, as I expected, a great lump came up in my throat, and I felt like bursting right out a crying. Heigh-ho!

I've jest about made up my mind, setting here and thinking it over, that, sence Mr. Hopkins didn't keep his promise to pay a visit to Pennyville, but keeps putting it off and putting it off, in the undefinable manner he does, the next time I can catch Timothy Bethuen all alone by himself I'll just pop the question to him, out and out; it's leap-year, and I've a perfect right to. I'll offer to support him, and make him a good living—but I'm awful afraid he's engaged to that Philistina Podd. It won't be leap-year again for four years, and I shall take advantage of it while it lasts. I haven't had anything make me feel so lonesome and old in all my life as Dora's baby.

CHAPTER XXIII.

THE BRIDAL DAY.

At last! at last! Alvira Slimmens is a married woman! no mistake this time. At three o'clock this afternoon, the ceremony was performed, in the presence of creditable witnesses, by the minister of my own church; and nothing has as yet occurred to render it null and void. No Professor's wife coming in this time to claim my lawful husband. I've took pains to procure the most doubious evidence that Mr. Hopkins is all that he assumes—a widower, who has already buried two wives, a man of some property, and of a few children, who sha'n't bother me much, I can tell him. Fifty-six years of patient plotting and planning has at last brought me to my bridal. I will confess to myself, now, before Mr. Hopkins comes in, that this moment is not all that I have pictured it in years gone by; he is ruther old, though younger than I, and he's got young ones, and I know he married me for my property, and that I shall have to continue to keep boarders, and support him, instead of him me. But I'm married, and Mehitable Green isn't, and that's triumph enough for one lifetime.

Nobody can say, neither, that Mr. Hopkins isn't a gentleman; there isn't a person in Pennyville who can compare with him in politeness. He's been to every fashionable resort in the United States, he dresses in the genteelest, most laboratory style, wears a gold eyeglass, takes snuff, and is far from a bad-looking man. It's true he limps just the least bit in the world—rheumatiz, I suppose—but nobody would notice it; and his cheeks are as red, and his hair as black and shiny as though he wasn't but twenty-five, instead of forty, which he owns up to. Altogether he's a match not to be ashamed of; and I guess, when we go into church together, next Sunday, there'll be some eyes that won't be fixed on the minister. It'll be the proudest moment of my existence. I make no doubt Mehitable Green would love to stay at home to show she didn't care; but she can't; curiosity will get the better of discretion.

THE DAY AFTER THE WEDDING.

For goodness, gracious sake, Mr. Hopkins, can you tell me who that carriage-load of young ones is, stopping at our door? Your family, Mr. Hopkins! One, two, three, four, five, six, seven, eight, nine of 'em—quite a pretty present to bring your confiding bride the morning after her marriage. I suppose I may trot round now the rest of my life, taking care of them interesting specimens, and keeping boarders to support you and your wooden leg. Oh, Mr. Hopkins, but you're a match for me! How handsome and attracting we both looked when we got off our wigs and our false teeth, and you took out your glass eye, and asked me to help you off with your wooden leg! It was quiet poetical, wasn't it? But let me tell you you haven't got so much the best of the bargain as you think; them great girls that I see trooping up the steps will have to give a little aid and assistance about keeping boarders for their father's benefit. I shall dismiss both my girls this very day. And mind, if you don't walk chalk with that wooden leg of yours, you'll find it in the fire some morning. It'll make excellent kindling wood. That leg gives me the advantage, you perceive, my dear; it won't do for you to quarrel with me. Take them young ones up stairs to the back attic room to take their things off, and then come down and go to market, if your rheumatiz don't prevent you, my love!

My! but doesn't he go off as meek as a lamb! I've got him under my thumb already. "It's an ill wind that blows nobody any good." He fooled me awfully about that limb of his, but he'll repent it; I'll rule him with his own wooden leg, worse than a rod of iron. Well, well, well, this is a curious world; and this is what I've toiled and struggled for during thirty-five long years. Heigh-ho! Well, half a husband's better than none, 'specially if he can be got under good government. Only so's that old Mehitable never finds it out, that's all I'll ask. Nine children at a batch! Well, everybody must have their number, and I've got mine at last. Heigh-ho.

(The end.)

The Farmer of To-Day,

if he wishes to be abreast of the times, has got to know more than how to hoe corn and pitch hay.

He must be a business man, and he has little opportunity of learning business methods unless he spends a term or two at a school which makes a specialty of teaching business.

Fredericton Business College

provides the facilities. The principal is a farmer's son and knows something of the needs of the farmer.

A few dollars sown in this way will produce a bountiful harvest.

Send for catalogue. Address,

W. J. OSBORNE,

York Street, - FREDERICTON, N. B.

Take a Holiday.

DO NOT WEAR OUT AND RUST OUT AT THE SAME TIME, IS GOOD ADVICE.

A writer for the farm page of one of the Canadian city journals gives the following which will apply to many of the householders in the Valley:

Before me lies a letter from the wife of a farmer in which is this passage: 'It is seldom that my husband and myself take a vacation. We do not feel that we can afford it. I cannot understand how so many afford it. They usually come home more tired than they go. I can rest better in my own home if I can get my work done so that I can take the time.'

Oh, the pity of it! Can you not see the colorless lives of those two; the ceaseless grind, grind, grind, days merging into weeks, these into months, months into years, with life and the whole world circumscribed by the boundaries of their little farm and the rising and setting of the sun!

They even question the economic right of other people to let go of the plow handles and put away the dish mop for a little while. They regard such action as sheer waste of time. They have failed utterly to grasp the problem of life in its larger aspect. Not consciously selfish, they are living for themselves alone, and for themselves not well. They are a type. In the busy marts of the city I have heard men boast they have not been from business for a day in twenty years, and when asked why, the answer has been invariably the same: 'Can't afford it.'

Hardly less pathetic than the above letter is this one from another part of the country: 'In my twenty-two years of married life I have had two vacations. When we had been married two years we took a carriage drive of forty miles, taking in a fair and visiting relatives on the way; we were gone six days. Eighteen years later, when my husband was in the legislature, I went back with him and stayed a week.' Thirteen days away from home in twenty-two years!

But even worse than this is a third letter: 'I have been married twenty-four years and have never made a visit of more than a day away from home, with one exception, when I visited my sister for one week.' Think of that. One week in twenty-four years!

It has never occurred to these people to look at this question from the other view point. It is not a question of whether they can afford to take recreation, but whether they can afford not to take recreation. 'Wear out, but not rust out,' is good as far as it goes. But a lot of people are wearing out and rusting out at the same time and the dual process brings an early ending.

Recreation is as essential to the mental, physical and moral development of the human being as is food, drink and protection from the elements. The life of the locomotive, which seldom gets to the shop for overhauling and repairs, is short, while the life of the locomotive, which goes into the shops at the end of every run, is almost indefinite. The human machine is not different from any other machine. To secure its greatest efficiency, it has got to be well oiled, well handled and protected from undue strains and neglect.

Recreation comes from the word re-create—to make new. It does not necessarily mean an expensive trip, but rather a change of scene, or occupation, the inspiration of new thoughts and putting aside of old thoughts and commonplace, everyday duties for something quite out of the monotonous routine. Perhaps what this means cannot be better expressed than in the following extract from a letter from one of our Western farm wives:

'At times during the summer we find leisure for several days' fishing trip with friends, a very pleasant diversion during the season of hard work. Last summer we spent a week with the children camping. Every few years my husband and I enjoy a trip for pure pleasure and sightseeing. This is usually of several weeks' duration. The children will have such opportunities later in life. Just now occasional visits to some friends in the city, picnics, or a day or afternoon off for fishing are sufficient reasons for better and more willing service.'

Make this woman's experience your own. You owe it to your health. Mr. Farmer, you owe it to your wife, you owe it to your neighbors, to take some form of recreation and to see that your wife participates in it.

Twenty-Five Cents is the Price of Peace.

The terrible itching and smarting, incident to certain skin diseases, is almost instantly allayed by applying Chamberlain's Salve. Price, 25 cents For sale by all dealers.

Some Household Recipes.

The following recipes come from different sources. That some of them will be found valuable by many of our readers we have no doubt:—

SCOTCH DROP SCONES.—Ingredients: 2 teacupfuls flour; 1-2 teaspoon bicarbonate of soda, 2 teaspoonfuls sugar, 1 egg, and 1 teacupful buttermilk or sour milk. Put dry ingredients into basin and mix well; make a well in centre of flour, break egg into it, add 1 teacupful of milk—just enough to make a thick batter—and beat for five minutes. Make griddle quite hot, rub over with little butter or lard, and drop spoonfuls of batter a little apart, keeping shape as round as possible. When half done slip a knife underneath, turn quickly, and brown on other side. Can be eaten hot or cold.

SHORTBRED.—Ingredients: 1 pound flour, 1-2 lb. butter, 1-4 lb. sugar, 1 eggspoonful baking powder. Beat butter to a cream, work in flour and baking powder, and add sugar. Mix well, turn onto a board, knead well with hands, make into two round, flat cakes, tap well with fork, and bake in slow oven.

SHORTBRED BISCUITS.—Ingredients: 6 ounces of flour, 2 ounces ground rice, 4 ounces butter, 2 ounces sugar. Knead on board, cut into little thin rounds, and bake in slow oven for twenty minutes.

SOFT GINGERBREAD.—Ingredients: 1-2 cup treacle (fill up the cup with sugar), 1-2 cup butter (fill up with boiling water), 2 cups flour, 1 teaspoon ginger, 1 teaspoon of carbonate of soda. Mix ingredients together and bake in quick oven.

CORN CAKES.—Ingredients: Sift 3 cups corn meal with 1 cup flour, 1-2 teaspoon salt, 3 teaspoonfuls sugar, 2 full teaspoons baking powder, 1 tablespoonful butter (after it has been melted over the fire), 3 cups sweet milk, 1 egg (without beating). Mix meal, flour, sugar, salt, and baking powder together in a basin, then mix with milk, adding egg and melted butter last. Beat all well and bake thirty-five minutes in a moderately hot oven in either patty tins or cake pans—only fill the tins half full. Very suitable for breakfast; to be eaten with jam or butter.

What a Wise Wife Knows.

She knows that home is more than half what you make it, and that a builder of a happy home is a success, indeed. She knows that it takes two to prolong a family quarrel; one, therefore, can terminate it. She knows that filling a house with bargains keeps a couple from owning the house. She knows that if we thought all we said we'd be wise, but if we said all we thought we'd be foolish. She knows that proud people seldom have friends. In prosperity they know nobody; in adversity nobody knows them. She knows that the woman who gains a trifle meanly is meaner than the trifle. She knows that it is less pain to learn in youth than to be ignorant in old age. She knows that if she cannot throw brightness over her home it is best not to throw a wet blanket over it. She knows that the wife who thinks she is perfect is generally the most imperfect. The unwise wife may gain by studying what the wise woman knows.

Character Building.

The world is full of imitations and imitators; and the world is full of failures. Nearly all the failures in the world, failures even as measured by our false, foolish and superficial standards of failure and success, are due to lack of individuality. A person cannot make a more serious failure, however, than that of not being himself. Even though, because of gaining wealth, or fame or some other possession which the world almost invariably misplaces, we call a man a supreme success, yet, if he has failed to be himself, he is a colossal failure. Success consists in doing our best in the place for which Nature has prepared us.—From December Physical Culture.

A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

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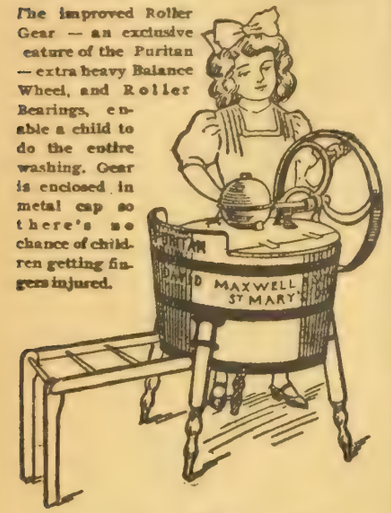
Reacting

Washing Machine

The improved Roller Gear — an exclusive feature of the Puritan — extra heavy Balance Wheel, and Roller Bearings, enable a child to do the entire washing. Gear is enclosed in metal cap so there's no chance of children getting fingers injured.



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Price $700.

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The L. M. TRASK CO.,
29 Dock St.,
ST. JOHN, N. B.

Prize List Maritime Winter Fair 1909.

(Continued from page 131.)

CLASS 32.

Donated by the Blatchford Calf Meal Factory, Waukegan, Ill., represented by A. A. Archibald, Truro, N. S., for best Wether lamb, 50 lbs, Blatchford's Early Lamb Food, won by Jas. Stewart.

CLASS 33.

Donated by the Robb Engineering Co., Amherst, N. S., for best four lambs all one breed, 1, Jas. Stewart; 2, Albert Boswell; 3, Logan Bros.

CLASS 34.

Donated by Bank of Montreal, Amherst, for best ewe in sections, 1, 2 and 3 of class 27, 28 and 29, $5.00. 2nd for best ewe in sections 1, 2 and 3, of class 23 and 24, $5.00, 1, J. E. Baker; 2. Chas. Symes.

CLASS 35.

Donated by the Hewson Woollen Mills, Ltd. Best flock of sheep (short wool) one gentleman's suit length made from the best quality of domestic wool, value $7.00, 1, Logan Bros.

Best flock short wool sheep, two suits heavy, ribbed underwear made from good quality domestic wool, value $5.00, 1, George Boswell.

CLASS 36.

Donated by Canadian Bank of Commerce, Amherst, N. S., for the largest and best collection of sheep, any pure breed, all of one breed owned by exhibitor, 1, Albert Boswell, 2, Jas. Stewart.

GRAND CHAMPIONSHIP.

Donated by Senator Mitchell, Montreal, Silver cup, for best pen, including one ewe lamb, one yearling ewe and one ewe two years and over. Won in 1907 and 1908 by Logan Bros; won in 1909 by Logan Bros.

SWINE.

CLASS 37.—YORKSHIRES.

Barrow 6 months and under 1 year, 1, Roper Bros; 2, W. H. P. Cooke, Little York; 3, Wm. Holmes, Amherst, N. S.

Barrow under 6 months, 1 and 3, Roper Bros; 2, W. H. P. Cooke.

Sow 9 months and under 15 months, 1, A. A. McBeath, Marshfield; 2, Roper Bros.

Sow 6 months and under 9, 1, A. A. McBeath; 2 and 3, Roper Bros.; 4, W. H. P. Cooke.

Sow under 6 months, 1 and 4, W. H. P. Cooke; 2, A. A. McBeath; 3, Roper Bros.

CLASS 38.—TAMWORTHS.

Barrow 6 months and under 1 year, 1, Wm. J. Gibson.

Barrow under 6 months, 1 and 2, Roper Bros.

Sow 9 months and under 15, 1 and 2, Roper Bros.

Sow 6 months and under 9, 1 and 3, Wm. J. Gibson, Marshfield; 2, Roper Bros.

Sow under 6 months, 1 and 2 Roper Bros.

CLASS 39.—BERKSHIRES.

Barrow 6 months and under 9, 1 and 2, Peter Brodie, Little York.

Barrow under 6 months, 1, Jas. Stewart; 2 and 3, Peter Brodie.

Sow 9 months and under 15, 1 and 4, Peter Brodie; 2, Amos Fowler; 3, J. R. Semple.

Sow 6 months and under 9 months, 1, Peter Brodie; 2 and 4, Wm. J. Gibson; 3, J. R. Semple.

Sow under 6 months, 1, Peter Brodie, 2, J. I. Stewart; 3, J. R. Semple; 4, Wm. Gibson.

CLASS 40.—ANY OTHER PURE BREED.

Barrow 6 months and under 9, 1 and 2 Leonard Court, Donaldson, P. E. I.; 3, W. H. P. Cooke.

Barrow under 6 months, 1, Leonard Court, 2 and 3, W. H. Pope Cooke; 4, Chas Symes.

Sow 9 months and under 15, 1 and 2, Leonard Court.

Sow 6 months and under 9 months, 1, A. H. Boswell; 2 and 3, Leonard Court; 4, W. H. P. Cooke.

Sow under 6 months, 1, W. H. P. Cooke; 2, A. H. Boswell; 3 and 4, Leonard Court.

CLASS 41.—GRADES OF ANY BREED.

Barrow 6 months and under 9 months, 1 and 2, Chas. A. Forrest; 3, W. N. Boomer, Amherst Pt., 4, Logan Bros.

Barrow under 6 months, Peter Brodie; 2, Amos Fowler; 3, Edwin Forrest, 4, Chas. A. Forrest.

Sow 9 months and under 15, 1, Roper Bros.

Sow 6 months and under 9 months, 1, Chas. A. Forrest; 2, Amos Fowler; 3, W. N. Boomer, 4, Geo. G. Lowther, Amherst Pt.

Sow under 6 months, 1, W. H. P. Cooke; 2, Edwin Forrest, 3, J. I. Stewart, 4, Geo. G. Lowther.

CLASS 42.—DRESSED SWINE CARCASSES.

Pair of carcasses, must have been shown in foregoing classes, 1, W. N. Boomer; 2 and 11, W. H. P. Cooke; 3, Roper Bros; 4 and 8, Peter Brodie; 5, Chas. A. Forrest; 6, Geo G. Lowther; 7, Edwin Forrest; 9 and 12, Wm. J. Gibson, 10 Amos Fowler.

CLASS 43.—SPECIALS.

Donated by Percy B. Evans, Wholesale Grocer, St. John, N. B., for dressed carcasses any breed, best barrow under 9 months, 1, A. W. Roper.

Best sow under 9 months, 1, Wm. Holmes; 2, Amos Fowler.

CLASS 44.

Donated by the Dominion Swine Breeders Association, A. P. Westervelt, Secretary, Toronto, Ont.

Sow 9 months and under 15, 1, Amos Fowler.

Best Sow 6 months and under 9, 1, J. R. Semple.

Best sow under 6 months, 1, J. I. Stewart.

CLASS 45.

Best sow 6 months and unner 9, 1, Albert Anderson.

CLASS 46.

Donated by the Dominion Swine Breeders Association, A. P. Westervelt, Secretary, Parliament Buildings, Toronto.

Best sow 9 months and under 15, 1, Roper Bros.

Best sow 6 months and under 9 months, 1, Peter Brodie.

Best sow under 6 months, W. H. P. Cooke.

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Musical Homes are the happiest homes. We have for Christmas trade a fine stock of **Pianos, Organs, Phonographs, Violins, Guitars, Banjos** and all kinds of musical instruments, and are making special prices and terms for Christmas trade.

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Dates to Remember.

Prince Edward Island Poultry Show, Charlottetown, P. E. I., January 5, 6, 7 and 8, 1909.

Westmorland Poultry Show, Moncton, N. B., January, 13th, 14th, and 15th, 1910.

Summerside Seed Fair, March 9th, 10th and 11th, 1910.

Sussex exhibition Sussex, N. B., September 19th to 23rd. 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Dominion Exhibition, St. John, N, B., September 5th to 14th, 1910.

Charlottetown, Exhibition, September 20th to 24th, 1910.

Halifax Exhibition, September 28th to Oct 6th, 1910.

N. B. Poultry Association Show, St. John, N. B., February 23, 24 and 25, 1910.

Nova Scotia Farmer's Association, New Glasgow, N. S., January 26, 27 and 28th. 1910.

CLASS 47 "A"

Donated by Atlas Stock Food Co., $5.00 in gold.
Pig 6 months and under, judged to be in best condition, Jas. I. Stewart.
Pig 6 months and under 9 months, J. R. Semple.

POULTRY.

CLASS 48.

Brahma; light cockerel, 1, C. H. Wisener, Pictou.
Brahma, light pullet, 1, C. H. Wisener.

CLASS 49.

Brahma, dark cockerel, 1, Tucker & Bottomley.
Brahma, dark pullet, 1, Tucker & Bottomley.

CLASS 51.

Cochin A O V cock, 1, J. R. Gifford, Halifax.
Cochin A O V hen, 2, J. R. Gifford.

CLASS 52.

Dorkings cock, 1, Joe Chapman, Amherst, N. S.; Wm. Robertson, Amherst.
Dorkings, hen, 1, Joe. Chapman; 2, W. Robertson.
Dorkings cockerel, 1, Earl Roach, Amherst, N. S.; 2, Wm. Robertson, Amherst, 3, Joe Chapman.
Dorkings pullet, 1, Wm. Robertson, 2, Earl Roach; 3, Joe Chapman.

CLASS 53.

B. Plymouth Rock cock, 1, Seth Jones; Sussex, N. B; 2, Craig Bros, Amherst; 3, Glenview Poultry Yards, Sussex.
B. Plymouth Rock hen; 1, Craig Bros; 2, Glenview Poultry Yards; 3, L. H. D. Foster, Marshfield, P. E. I.
B. Plymouth Rock Barred cockerel; 1, Craig Bro; 2, W. R. Turner; Stellerton, 3, Glenview Poultry Yards, 4, Craig Bros., 5, Seth Jones; 6, Glen View Poultry Yards.
B. Plymouth Rock pullet, 1, Craig Bros; 2 and 3, Glen View Poultry Yards; 4, Seth Jones; 5, L. H. D. Foster, Marshfield; 6, Wm. Fanning, Amherst.

Class 54.

Plymouth Rock W cock, 1, R. M. Jackson, Moncton; 2, Seth Jones.
Plymouth Rock W hen, 1, Seth Jones; 2, R. M. Jackson.
Plymouth Rock W cockerel, 1, Jeth Jones; 2, Albert J. Boswell.
Plymouth Rock W pullet, 1; R. M. Jackson; 2, Seth Jones; 3, Albert Boswell

CLASS 55.—PLYMOUTH ROCK, BUFF.

Everything in this class went to L. H. D. Foster, Marshfield, P E I.

CLASS 56.

Wyandottes Golden cock, 1; G. H. Seaman, Moncton; 2, J. R. Gifford.
Wyandottes Golden hen, 1 and 2, J. R. Gifford.
Wyandottes Golden cockerel, 1, Tucker & Bottomley; 2, Geo. H. Seaman.
Wyandottes Golden pullet, 1, Geo. H. Seaman; 2, Tucker & Bottomley.

CLASS 57.

Wyandottes Silver cock, 1; Tucker & Bottomley; 2, E. S. Brown.
Wyandottes Silver hen, 1, Tucker & Bottomley; 2, C. H. Wisener.
Wyandottes Silver cockerel, 1, Robt. A. Knight; 2, E. S. Brown.
Wyandottes Silver pullet, 1, Seth Jones; 2, Robt. A. Knight.

CLASS 58.

Wyandottes, Buff cock, 1, Glen View Poultry Yards, Sussex, N. B.
Wyandottes, Buff hen, 1, Seth Jones, Sussex, N. B.; 2, Glen View Poultry Yards.
Wyandottes, Buff cockerel, 1, Glen View Poultry Yards; 2, Seth Jones.
Wyandottes, Buff pullet, 1, Glen View Poultry Yards; 2, Seth Jones.

CLASS 59.

Wyandottes, W. cock, 1, Seth Jones; 2 and 3, Black Bros., New Glasgow, N. S.
Wyandottes, W. hen, 1 and 4, seth Jones; 2, A. C. Reid, Tidnish; 3, Black Bros.; 5, Glen View Poultry Yards.
Wyandottes, W. cockerel, 1; Glen View Poultry Yards; 2, A. C. Reid; 3, Seth Jones.
Wyandottes, W. pullet, 1, Aaron Moreash, Oakfield; 2, 3, 4 and 5, A. C. Reid.

CLASS 60—WYANDOTTES.

Everything in this class went to W. H. Henry, Shubenacadie.

CLASS 61.

Andalusian, cock, 1, Arthur Miles, Brookdale.
Andalusian, hen, 1 and 2, B. W. Ralston, Amherst, N. S.
Andalusian; cockerel, 1 and 2, B. W. Ralston.
Andalusian, pullet, 1 and 2, Arthur Miles.

CLASS 62.

Minorcas Black, S. C. cock, 1, Kingsdale Farm Co., Sussex; 2, H. H. Howard, Little York.
Minorcas, Black, S. C. hen, 1, Kingsdale Farm Co.; 2, W. H. Henry.
Minorcas, Black, S. C. cockerel, 1, F. L. Blair, Amherst, N. S.; 2, W. H. Henry.
Minorcas, Black, S. C. pullet, 1 and 3, Kingsdale Farm Co., 2, F. L. Blair.

CLASS 63.

Minorcas, Black, R.C. cock, 1, Kingsdale Farm Co.; 2, Sydney Poultry Yards, Charlottetown.
Minorcas, Black, R. C. hen, 1, Kingsdale Farm Co.
Minorcas, Black, R. C. cockerel, 1, Sydney Poultry Yards; 2, Kingsdale Farm Co.
Minorcas, Black, R. C. pullet, 1, Kingsdale Farm Co.; 2, C. H. Wisner.

CLASS 64.

Leghorns, White, S. C. cock, 1 and 2, Seth Jones.
Leghorns, White, S. C. hen, 1 and 2, Seth Jones.
Leghorns, W. S. C. cockerel, 1 and 2, Seth Jones; 3, C. H. Wisener, Pictou, N. S.
Leghorns, W S C, pullet, 1, Seth Jones; 2, John Page, Amherst; 3, Seth Jones.

CLASS 65.

Leghorns Brown, S. C. cock, 1, Glenview Poultry Yards; 2, Seth Jones.

Your Music is in the Edison Phonograph

Do you know how much you are losing by not owning an Edison Phonograph?

This instrument was made for you by Mr. Edison. It is intended to bring music into your home. It will help you entertain your guests. It will amuse you during your leisure hours. It will help you to bring up your family to love music.

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Leghorns, B. S. C, hen, 1, Seth Jones; 2, Glenview Poultry Yards.
Leghorns, B. S C. cockerel 1 and 3, Glenview Poultry Yards; 2 and 4, Seth Jones.
Leghorns, B S C pullet, 1 and 3, Glenview Poultry Yards; 2, Seth Sones.

CLASS 66.—LEGHORNS, BROWN R. C.

All prizes in this class went to E. H. Hall Shubenacadie.

CLASS 67.

Leghorns Buff S C hen, 1 and 2, J. R. Gifford.
Leghorns Buff S C cockerel, 1, J. V. Jackson, Moncton; 2, J. R. Gifford.
Leghorns Buff S C pullet, 1, J. V. Jackson.

CLASS 68.

Leghorns, A. O. V. cock, 1, Vernon Jackson.
Leghorns, A. O. V. hen, 1, Vernon Jackson.
Leghorns, A. O. V. cockerel, 1, A. T. Parker, Shubenacadie, N. S.; 2, Vernon Jackson.
Leghorns, A. O. V. pullet, 1, A. T. Parker; 2, Vernon Jackson.

CLASS 69.

Game, Black Red, hen, 1, C. S. Snowden, Amherst; 2, David Smith, Amherst.
Game, Black Red, cockerel, 1, David Smith; 2, C. E. Snowden.

CLASS 71.

Game Indian, Cor. and White, 1, Tucker & Bottomley, Halifax, 2, C. S. Snowden.
Game Indian, Cor. and White, hen, 1 and 2, Tucker & Bottomley.
Game, Indian, Cor. and White, cockerel, 1, Wm. Robertson; 2, Tucker & Bottomley.
Game, Indian, Cor. and White, pullet, 1, Wm. Robertson; 2, Tucker & Bottomley.

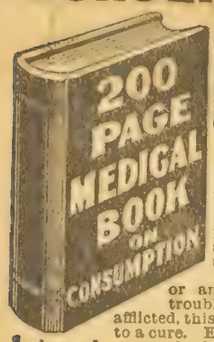
CLASS 72.

Game Pyle, pullet, 1, David Smith.

CLASS 75.

Hamburgs, G. P. or S. P. cock, 1, L. A. Hazard, Charlottetown.
Hamburgs, G. P. or S. P. hen, L. A. Hazard.
Hamburgs, G. P. or S. P. pullet, L. A. Hazard.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1432 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

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S. Kerr, Principal.

PURE WOOL HEWSON AMHERST GUARANTEED

Hewson's Pure Wool Unshrinkable Underwear

CLASS 76.

Hamburgs, G. S. or S. S. cock, 1 and 2, A. H. Boswell.

Hamburgs, G. S. or S. S. hen, 1 and 2, Sydney St. Poultry Yards.

Hamburgs, G. S. or S. S. cockerel, 1 and 2, A. H. Boswell.

Hamburgs, G. S. or S. S. pullet, 1 and 2, A. H. Boswell.

CLASS 77.

Silver Spangled Hamburgs, cock, 1, J. R. Gifford.

Silver Spangled Hamburgs, hen, 1, J. R. Gifford.

Silver Spangled Hamburgs, pullet, J. R. Gifford.

CLASS 78.—HOUDANS.

All prizes in this class went to Earl Roach, Amherst, N. S.

CLASS 79.

Buff Orpington, S. C. cock, 1, Haszard & Duchemin, Charlottetown; 2, Wm. Robertson; 3, H. H. Weeks, Amherst.

Buff Orpington, S. C. hen, 1, Wm. Robertson; 2, E. H. Parsons, Springhill, N. S.; 3, Haszard & Duchemin.

Buff Orpington S. C. Cockerel, 1 and 2, Wm. Robertson; 3 and 4, Haszard & Duchemin; 5, Wm. Robertson

Buff Orpingtons, pullets, 1 and 2, Wm. Robertson; 3, 4 and 5, Haszard & Duchemin,

CLASS 80.

Orpingtons, White, cock, 1, Ripley Bros., Maccan, N. S.; 2, C. H. Wisener.

Orpingtons, white, hen, 1, C. H. Wisener

Orpingtons, white, cockerel, 1, F. L. Blair; 2, Ripley Bros.; 3, C. H. Wisener.

Orpington, white, pullet, 1 and 2, F. L. Blair; 3, C. H. Wisener.

CLASS 81.

Orpingtons, Black, cock, 1, E. H. Parsons; 2, C. H. Wisener.

Orpingtons, Black, hen, 1, H. E. Call, Stellarton; 2, C. H. Wisener.

Orpington, Black, cockerel, 1, Wm. Robertson; 2, H. E. Call.

Orpingtons, Black, pullet, 1, Wm. Robertson.

CLASS 82.

Bantams, Game, cock, 1, H. Lawrence, Nappan

Bantams, Game, cockerel, 1, Gerald Black, Amherst.

CLASS 83.—SEA BRIGHT, BANTAMS.

All prizes in this class went to L. A. Haszard, Charlottetown

CLASS 84.

Bantams, Cochin, cock, 1, J. V. Jackson.

Bantams, Cochin, hen, 1, Tucker & Bottomly; 2, J. V. Jackson

Bantams, Cochin, cockerel, 1, Geo. Seaman, Moncton; 2, J. V. Jackson.

Bantams, Cochin, pullet, 1, Geo. Seaman; 2, J. V. Jackson.

CLASS 85.

Bantams, A O V, cock, J V Jackson; 2, L A Haszard.

Bantams, A O V, hen, 1 and 2, J. V. Jackson.

CLASS 86.

Rhode Island, Reds, S C, cock, 1, Glenview Poultry Yards; 2, Seth Jones

Rhode Island, Reds, 1, hen, Seth Jones; 2, Glenview Poultry Yards.

Rhode Island, Reds, cockerel, 1, Glenview Poultry Yards; 2, Seth Jones; 3, Thos. Kyle, Sussex Corner.

Rhode Island, Reds, pullets, 1, Thos. Kyle; 2, Glenview Poultry Yards; 3, Seth Jones.

CLASS 87.

Rhode Island Reds, R C cock 1, W H Henry; 2, R M Jackson, Jacksonville, C B.

Rhode Island Reds, R C; hen, 1, R. M. Jackson; 2, W H Henry.

Rhode Island Reds, R C, cockerel, 1, W H Henry; 2, T C Munn, Leiches Creek, C B.

Rhode Island Reds, R C, pullets, 1, W H Henry; 2, R M Jackson.

CLASS 88.

Langshans, any variety, cock, 1, Wm Mitchell, Halifax; 2, Tucker & Bottomley.

Langshans, any variety, hen, 1 and 2, Tucker & Bottomley.

Langshans, any variety, cockerel, 1, Tucker & Bottomley; 2, Wm Mitchell.

Langshangs, any variety, pullet, 1, Harold Weeks; 2, Wm Mitchell.

CLASS 89.

Any other variety, hen, 1 and 2, W H Henry.

Any other variety, cockerel, 1, W H Henry; 2, Tucker & Bottomley.

Any other variety, pullet, 1 and 2, Tucker & Bottomley.

TURKEYS, GEESE AND DUCKS.—CLASS 90.

Turkeys, Bronze, over 1 year, male, 1, H Lawrence; 2, A Boswell, Jr.; 3, Samuel Harrison.

Turkeys, Bronze, over 1 year, females, 1, A Boswell; 2, H Lawrence; 3, Samuel Harrison.

CLASS 91.

Turkeys, Bronze, 1909, male, 1 and 2, Samuel Harrison; 3 and 4, H Lawrence.

Turkeys, Bronze, 1909, females, 1 and 3, S Harrison; 2 and 4, H Lawrence.

CLASS 93.

Turkeys, white, 1909, female, 1 Albert Boswell.

CLASS 94.

Turkeys, A O V, over 1 year, 1, T. J. Etter.

Turkeys, A O V, over 1 year, female, 1 and 2, T J Etter.

CLASS 95.

Turkeys, any other breed, 1909, male, 1, 2, and 3, T J Etter.

Turkeys, any other breed, female 1, 2 and 3, T J Etter.

CLASS 96

Geese, Toulouse, over 1 year, male, 1, Albert Boswell; 2, Samuel Harrison.

Geese, Toulouse, over 1 year, female, 1, A Boswell; 2, Samuel Harrison.

GEESE, TOULOUSE—CLASS 97.

All prizes in this class went to Samuel Harrison, Maccan, N S.

CLASS 98.

Geese, Embden or Breman, over 1 year, male, 1 and 2, A Boswell, Jr.; 3, J E Baker & Son; 4, H Lawrence.

Geese, Embden or Breman, female, over 1 yr., 1 and 2, A Boswell; 3 and 4, J E Baker & Son.

CLASS 99.

Geese, Embden or Breman, 1909, male, 1 A Boswell; 2, J E Baker & Son; 3 and 4, H Lawrence.

Geese, Embden or Breman, 1909, female, 1, A Boswell; 2, J E Baker & Son; 3 and 4, H Lawrence.

CLASS 100.

Geese, any other variety, over 1 year, 1, Burder Goodwin, Baie Verte; 2, A Boswell.

Geese, any other variety, over 1 year, male, 1 and 2, B Goodwin; 3, Albert Boswell, 4, H Lawrence.

CLASS 101.

Geese, any other variety, male, 1909 1, B Goodwin; 2, A Boswell.

Geese, any other variety, 1909, female, 1 and 2, B Goodwin; 3, A Boswell.

CLASS 102.

Ducks, Pekin, over 1 year, male, 1, A Boswell; 2, J Page, Amherst; 3, J Wesley

Ducks, Pekin, over 1 year, female, 1, A Boswell; 2, J Page; 3, John Wesley.

CLASS 103

Ducks, Pekin, 1909, male, 1, A Boswell; 2, J Page; 3, J Wesley.

Ducks, Pekin, 1909, female, A Boswell; 2, J Wesley; 3, J V Jackson

CLASS 104.

Ducks, Rouen, over 1 year, male 1, G M Holmes; 2, A H Boswell; 3, T J Etter.

Ducks, Rouen, over 1 year, female, 1, Geo M Holmes; 2, A H Boswell; 3, T J Etter.

DUCKS, ROUEN, 1909—CLASS 105.

All prizes in this class went to H Lawrence, Nappan.

CLASS 106.

Ducks, Muscovey, over 1 year, 1, H Lawrence.

DUCKS, INDIAN RUNNER—CLASS 108.

All prizes in this class went to Chas Symes, Minudie.

DUCKS, INDIAN RUNNER—CLASS 109.

All prizes in this class went to Chas Symes Minudie.

CLASS 110

Ducks, Cayuga, 1909, female, 1, A Boswell.

LIVE UTILITY POULTRY.

CLASS 112.

Wyandottes; white, pair cockerels, 1, A O F Gill, Little York, P E I; 2, J S Thompson, E Amherst; 3, M MacPherson, Springhill.

Pair White Wyandotte Pullets, 1, J S Thompson, 2, Kingsdale Farm Co; 3, Glenview Poultry Yards.

Pair Wyandottes, Silver, cockerels, 1, E S Brown, Pictou, N S; 2, Lloyd Black; 3, Tucker & Bottomley.

Pair Wyandottes, Silver, pullets, 1 and 2, Lloyd Black; 3, E S Brown.

Pair Wyandottes, Buff, pullets, 1 and 2, Glenview Poultry Yards.

Barred Plymouth Rocks, pair cockerels, 1, and 3, Craig Bros; 2, Fernie Pushie, Port Mulgrave.

Barred Plymouth Rocks, pair pullets, 1 and 2, Craig Bros; 3, Glenview Poultry Yards.

Plymouth Rocks, white, pair cockerels, 1, A Boswell.

Plymouth Rocks, white, pair pullets, 1, Fernie Pushie; 2, Albert Boswell.

Plymouth Rocks, Buff, paircockerels, 1 Kingsdale Farm Co.

Plymouth Rocks, Buff, pair pullets, 1, L D H Foster; 2, Kingsdale Farm Co.

Buff Orpingtons, pair cockerels, 1, Wm Robertson; 2, J D Robertson, Springhill; 3, E S Brown.

Buff Orpingtons, pair pullets, 1, 2 and 3, Wm Robertson.

Orpingtons, any other variety, cockerels, 1, E H Parsons; 2, Tucker & Bottomley; 3, Ripley Bros.

Orpingtons, any other variety, pair pullets, 1, E H Parsons; 2, Ripley Bros.

Dorkings, Silver Grey, pair pullets, 1, Wm Robertson; 2, John Page; 3, Joe Chapman.

Rhode Island Reds, pair cockerels, 1, Aaron Moreash; 2, Glenview Poultry Yards; 3, T C Munn.

Rhode Island Reds, pair pullets, 1, Aaron Moreash; 2 and 3, Glenview Poultry Yards.

First Cross any pure bred pullets, 1, Ripley Bros.

UTILITY BREEDING PENS.

Wyandottes, White, 1, Aaron Moreash, Oakfield, N S; 2, Black Bros, New Glasgow, N S; 3, Matthew MacPherson, Springhill, N S.

Wyandottes, Silver, 1 and 2, Lloyd Black, Amherst, N S; 3, C H Wisener, Pictou, N S.

Barred Plymouth Rocks, 1, Wm Fanning, Amherst, N S; 2, Craig Bros, Amherst, N S; 3, Glen View Poultry Yards, Sussex, N B.

Plymouth Rocks, White, 1, Seth Jones, Sussex, N B.

Plymouth Rocks, Buff, 1, L H D Foster, Marshfield.

Orpingtons, Buff, 1, Wm Robertson, Amherst; 2, E S Brown, Pictou, N S.

Orpingtons, White, 1, Ripley Bros, Maccan, N S.

Dorkings, 1, Joe Chapman, Amherst.

Rhode Island Reds, 1, Glen View Poultry Yards; 2, Thos Kyle, Sussex Corner, N B; 3, W H Henry, Sheubenacadie.

Any other variety, 1, W H Henry; 2, Glen View Poultry Yards; 3, Wm Mitchell, Halifax, N S.

MATING PENS.

Barred Plymouth Rock Breeders' Pen, to consist of 1 male and 4 females, mated to produce exhibition cockerels, 1, Glen View Poultry Yards; 2, Craig Bros; 3, Seth Jones.

Same as above, except mated for exhibition pullets, 1, Seth Jones; 2, C J Coll, Stellarton, N S; 3, Joe Chapman.

Brown Leghorn Breeders' Pen, to consist of 1 male and 4 females, mated to produce exhibition cockerels, 1, C H Wisener; 2, Glen View Poultry Yards; 3, Seth Jones.

Brown Leghorn Breeders' Pen, to consist of 1 male and 4 females, mated to produce exhibition pullets, 1, Seth Jones; 2, Glen View Poultry Yards.

CLASS 115.—LIVE POULTRY SPECIALS.

MARITIME FARMER'S Special.

Barred Plymouth Rock cock, hen, cockerel, and pullet, 1, Craig Bros.

Best White Plymouth Rock cock, hen, cockerel and pullet, 1, Seth Jones.

Best White Wyandotte cock, hen, cockerel and pullet, 1, Seth Jones.

Best S C Brown Leghorn cock, hen, cockerel and pullet, 1, Glen View Poultry Yards.

Best S C Minorca cock, hen, cockerel and pullet, Kingsdale Farm Co, Sussex, N B.

CLASS 117.

Donated by Christie Bros, Amherst, for best six chickens, any variety, all of one breed, 1 A C Bond, River Phillip, N S; 2, Dan A Donalds, Amherst, N S.

CLASS 118.

Donated by the Maritime Poultryman, C P Thorne, Manager Charlottetown, P E I, advertising value $10.00, 1, Wm Robertson.

CLASS 119.

Donated by the Reliable Poultry Journal, Quincy, Ill, for best pen in class 112, a yearly subscription to the Reliable Poultry Journal to each of the six making the highest scoring, 1, John Page, Amherst; 2, Joe Chapman; 3, Harold Weeks, Amherst.

Christie Bros' leather suit case, for best pen of utility birds, Wm Fanning.

Blatchford Calf Meal Factory, 50 pounds poultry meal, best utility breeding pen, Wm Robertson.

The McLean Milling Co, Chicken Food, Craig Bros.

Cash Shoe Store, boots, best utility pen, Aaron Moreash.

Barkers, Ltd., English toilet set, best pen of English breeds, Wm Robertson.

J Q Reid, goods for fancy test, best White Leghorn cockerel and pullet, Seth Jones.

Douglas & Co, carving set, best cock, hen, cockerel and pullet, Buff Orpington, Wm Robertson.

B McLaughlin, goods, best cock, hen, cockerel and pullet, of Asiatic varieties, Tucker & Bottomley, Halifax.

M P Shipley, goods, best Bantam cock, hen, cockerel and pullet, L A Haszard, Charlottetown, P E I.

Late Hon W T Pipe's cup, for best cock, hen, cockerel and pullet, Craig Bros.

E N Rhodes' cup, best two cockerels and pullets in live utility class, Wm Robertson.

Maritime Poultry Association cup, best exhibit of live poultry, Seth Jones.

H J Logan, silver plate, best judging of dressed chickens, ducks, geese and turkeys, Mrs. J. A. Christie.

Barkers, Ltd, best judging of chickens, ducks, geese and turkeys, dressed, motor cost, 1, Miss Atkinson, Amherst Head; 2, leather dress suit, case; 2, Mrs C M Shipley, Amherst Head; teaset, 3, Mrs Atkinson, Amherst Head.

Spramotor Co, best collection of fruit, sprayed with the Spramotor goods, W B Wallace, Newport Landing.

Steele Briggs' cup, best showing in seed grains, Donald Innis, Tobique River, N B.

Dr J W Robertson's medals, girl or boy making the highest score in hand selected grain, oats, 1 Pearl Patterson, Rockville, N B; wheat, Nettie Moore, Scotch Lake, N B.

Moffatt Bros, poultry supplies, best cockerel and pullet, Mediterranean varieties, 1, Glen View Poultry Yards; 2 Seth Jones.

Martins, Ltd, best cock, hen, cockerel and pullet, Seth Jones.

Union Shoe Store, goods best cock, hen, cockerel or pullet, any variety, Kingsdale Farm Co.

S Coates & Co, gents' furnishings, best pen of poultry, Wm Robertson.

W R Smith & Co, goods, best cockerel, Wm Robertson.

DRESSED POULTRY.

CLASS 144.

Best two turkeys, over 1 year, males, 1, Thos J Etter, Westmorland Point.

Best two turkeys, over 1 year, females, 1, Ripley Bros, Maccan, N S; 2, Thos J Etter.

Best two turkeys of 1909, males, 1, W H Henry, Shubenacadie, N S; 2, 3 and 4, T J Etter.

Best two turkeys of 1909, females, 1, W H Henry; 2, 3 and 4, Thos J Etter.

Best 2 geese, white, 1, T J Etter; 2, W H Henry; 3, Ripley Bros, Maccan, N S.

Best two geese, colored, 1, Wm Robertson, Amherst; 2, Earl Roache; 3 and 4, T J Etter.

Best two ducks, white, 1 and 3, W H Henry; 2, T J Etter.

Best two ducks, colored, 1 and 3, T J Etter; 2, Wm Robertson.

Best two Plymouth Rock cockerels, 1, Laurie M Anderson, Sackville, N B; 2, Wm Robertson; 3, Dan A Donald, Amherst; 4, T J Etter.

Best two Plymouth Rock pullets, 1, John R Harrison, Maccan; 2, W H Henry.

Best 2 Wyandotte Cockerels, 1, 2 and 3, Wm Robertson; 4, W H Henry.

Best 2 Wyandotte Pullets, 1, W H Henry, 2, Wm Robertson.

Best 2 Orpington Cockerels, 1, 2 and 3, Wm Robertson; 4, W E Harding.

Best 2 Orpington Pullets 1 and 2, Wm Robertson; 3, J T Etter.

Best 2 Rhode Island Red Cockerels, 1 and 2, W H Henry; 3, Wm Robertson.

Best 2 Rhode Island Red Pullets, 1 and 2, W H Henry.

Best 2 Cockerels, any variety, 1, H Lawrence.

Best 2 Cockerels, any variety, 1, Wm Robertson; 2, Hibbert Lawrence.

Best 2 Pullets, any variety, 1 and 2, Wm Robertson.

Best 6 Chickens, any variety, 1, Wm Robertson; 2, Laurie M Anderson, Sackville; 3, J R Harrison; 4, W H Henry.

DRESSED POULTRY SPECIALS—CLASS 145.

Donated by the S H McDowell Co., Ltd, $5.00 in harness for the best pair dressed cockerels. Won by Laurie M Anderson, Sackville, N B.

CLASS 148.

Silver Cup donated by the Maritime Poultry Association for best exhibit of Dressed Poultry. 1, Wm Robertson, Amherst, N S

PIGEONS—CLASS 142.

Collection to consist of not less than four pairs. 1, R Carter, Halifax, N S.

CLASS 143.

Special donated by T. McNair. $1.00 for best collection of Pigeons, R. Carter, Halifax, N S.

PLUCKING CONTEST.

Boys under 15, 1, Frank Elliott; 2, Frank Jones; 3, Elliott Black; 4, Norman Tower.

Boys over 15, 1, Amos Fowler; 2, Chas Symes; 3, Robt Bell; 4, Leon Punch.

JUDGING COMPETITION.

Open to those engaged in Agriculture in the Maritime Provinces under 25. Donated by the Halifax Hotel, E. L. McDonald, Manager, for best Judging Dairy Cattle, 1, D Bridges; 2, C T Coates; 3, G S Dunlap; 4, G D Grey; 5, H R Brown.

Donated by J A Leaman & Co, Meat Dealers, Halifax, 1, J H Ross; 2, D Bridges; 3, C T Coates; 4, C F Fawcett; 5, Walter Dickie.

Donated by Stanfields' Ltd., Truro, 1, A B Baird; 2, E S Leonard; 3, Amos Fowler; 4, C T Coates; 5, W G Oulton.

APIARIAN SUPPLIES.

Best 1 doz. Jars of Honey, light, 1, B W Baker, Amherst, N S; 2, Julia A Corbett, Amherst Pt.; 3, W B Wallace, Newport Landing; 4, Craig Bros, Amherst.

Best 1 doz Jars Honey, medium, 1, Julia A Corbett; 2, B W Baker; 3, Craig Bros.

Best 1 doz Jars Honey, dark, 1, Julia A Corbett 2, B W Baker; 3, Craigg Bros.

Best 1 doz Sections Honey in Comb, light, 1 W B Wallace; 2, B W Baker; Julia A Corbett.

Best 1 doz sections honey in comb, 1, B W Baker; 2, Julia A Corbett.

Best 1 doz Sections Honey in Comb, dark, 1, B W Baker.

Best 3 lbs. of Beeswax, 1, Craigg Bros; 2, B W Baker; 3, W B Wallace.

FRUIT—NOVA SCOTIA.

COUNTY COLLECTION.

Halifax County 1, Louis McKeen, Gays River; 2, Gordon McKeen, Gays River.

Queens County, W P Freeman, New Grafton.

Annapolis County, 1, Guy C Phinney, Spa Springs; 2, John S Phinney, Spa Springs.

Kings County, 1, L E Healey, Church St; 2, W H Woodworth, Berwick.

Hants County, 1, W B Wallace, Newport Landing; 2, Chas E Aylward, Falmouth.

Cumberland County, 1, Samuel Harrison, Maccan; 2, Howard Betts, Pugwash.

Colchester County, 1, Geo M Anderson, W New Annan; 2, Robt Anderson, W New Annan.

Pictou County, 1, N M Hamblin, Durham; 2, A Hamblin, Durham.

Antigonish County, 1, H H MacPhie, Antigonish.

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With Words and Music Complete.

This is a splendid collection of favorite old-time songs and ballads—songs that touch the heart and recall the tenderest memories, many of them having been popular favorites for forty or fifty years and just as dearly loved to-day as when they were written. Each song is published in this book with both words and music complete and we question if there ever has been issued a book containing so large a collection of sterling favorities at so low a price. We will send this book post-paid to any address on receipt of 15 cents.

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The cures being made by this magic lotion every day are truly remarkable. I have repeatedly restored to sight persons nearly blind for years.

Ulcers, wild hairs, granulated lids disappear almost instantly with the use of this magic remedy. Weak, watery eyes are cleared in a single night and quickly restored to perfect health. It has repeatedly cured where all other remedies and all doctors had failed. It is indeed a magic remedy and I am glad to give this free trial to any sufferer from sore eyes or any eye trouble.

Many have thrown away their glasses after using it a week. Preachers, teachers, doctors, lawyers, engineers, students, dressmakers and all who use their eyes under strain find with this Magic Lotion a safe, sure and quick relief. If you have sore eyes or any eye trouble write me to-day. I am in earnest in making my offer of a free trial bottle of this lotin. I am glad to furnish prof in many well-proven and authentic cases where it has cured cataract after the doctors said that only a dangerous and expensive operation would save the sight. If you have eye trouble of any kind you will make a serious mistake if you do not send for my great free offer of this Magic Eye Lotion. Address with full description of your trouble and two-cent stamp, H. T. Schlegel Co., 3789 Home Bank Bldg., Peoria, Ill., and you will receive by return mail, prepaid a trial bottle of this magic remedy that has restored many almost blind to sight.

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NEW BRUNSWICK.

Albert County, 1, Wm Colpitts, Mapleton; 2, John N Campbell, Mapleton.

Charlotte County, 1, Mrs Huntley Boyd, Waweig.

Gloucester County, 1, Edmund Carter, Bathurst.

Kings County, 1, C E Dickson, Hampton; 2, A H Fairweather, Hampton.

Queens County, 1, Geo McAlpine, Lower Gagetown, 2, Jas B Belyea, Lower Gagetown.

Restigouche County, 1, Jas Stewart, Dalhousie; 2, Mrs Margaret Stewart, Dalhousie

St John County, 1, St John Agricultural Society; 2, W R McFald, Upper Golden Grove.

Sunbury County, 1, I W Stephenson, Upper Sheffield; 2, F H Hubbard, Burton.

Victoria County, 1, Donald Innis, Tobique River.

Westmoreland County, 1, Benj Charters, Chartersville; 2, Geo L Welling, Shediac Cape.

York County, 1, S B Hatheway, Fredericton.

PRINCE EDWARD ISLAND.

Kings County, 1, Percy Robertson, New Perth; 2, J Robertson & Son.

Queens County, 1, J A Moore, Hazelbrook; 2, A M McRae, Pownal.

Prince County, 1, Chas A Beck, Bedeque; 2, A Schurman, Central Bedeque.

SEED DEPARTMENT.

CLASS 152.

Spriug Wheat, White Fife or Red Fife, 1, J R Harrison, Maccan, N S; 2, Donald Innis, Tobique River, N B; 3, E W Bulman, Rusticoville, N B; 4, Leonard Court, Donaldson, P E I; 5, H B Parlee, Sussex, N B.

Spring Wheat, any other variety, 1, A E McLean, South West, Lot 16, P E I; 2 Wood & Son, Hazelbrook; 3, Geo E Fisher, Chatham, N B; 4, C McLellan, Arlington, P E I; 5, F Arsenault, Urbanville, P E I.

Oats, Banner Type, 1, Donald Innis; 2, Richard Creed, Albion; 3, A E McLean; 4, E E Arsenault; 5, H H Atkinson, Ft, Lawrence, N S.

Oats, any other variety, 1, Wm J Gibson, Marshfield, P E I; 2, Donald Innis; 3, J R Harrison; 4, Ira L Rodd, North Wiltshire; 5, B A Mallet, Little York, P E I

Oats, Black, any black variety, 1, C McLellan; 2, A D McDonald, South West Margaree; 3, Ira L Rodd; 4, E W Bulman; 5, Donald Innis.

Barley, 6 rowed, any 6 rowed variety, 1, A E McLean, 2, Wm J Gibson; 3 J E Harrison; 4, Peter Brodie, Little York; 5, Ira L Rodd.

Barley, 2 rowed, any 2 rowed variety, 1, Amos Rodd; 2, Donald Innes; 3, A E McLean; 4, Samuel Harrison; 5, Leonard Court, Donaldson.

Barley, hulless, 1, Donald Innes.

Buckwheat, smooth, 1, H B Parlee; 2, Leonard Court; 3, B A Mallett; 4, Albert Anderson.

Buckwheat, any other variety, rough, 1, J R Harrison; 2, Donald Innes, 3, Samuel Harrison; 4, H B Parlee.

Field Peas, large, any large and medium sized variety, 1, H B Parlee; 2, J H King, Smith's Creek, N B; 3, S Harrison; 4, J E Harrison.

Field Peas small, any small variety, 1, Henry Gordon, Chatham, N B; 2, Donald Innes; 3, E E Arsenault.

Rye, 1, Donald Innes.

Flax, 1, Amos Rodd, North Milton; 2, Donald Innes.

Timothy Seed, 1, Samuel Harrison; 2, J E Harrison; 3, Richard Creed; 4, J R Harrison.

Field Beans, white, 1, Samuel Harrison.

Field Beans, 1, Donald Innes.

Potatoes, round white type, 1, H B Parlee, 2, J R Harrison; 3, J E Harrison; 4, H R Brown

Potatoes long white type such as Empire State, 1, Henry Gordon; 2, Peter Brodie; 3 J E Harrison; 4, W W Embree, West Amherst.

Potatoes, Rose Type, such as Early Rose, 1, J R Harrison; 2, Christopher Dernier, Fort Lawrence; 3, Retson Bros., Truro; 4, Henry Gordon.

Potatoes, Red Type as Dakota Red, 1, Harry Brown; 2, Henry Gordon; 3, Samuel Harrison; 4, J E Harrison.

Potatoes dark skinned, such as McIntyre, 1, Wm Fowler, Amherst Pt; 2, Geo M Holmes, 3, Christopher Dernier; 4, H B Parlee.

CLASS 154.

Spring Wheat, red or white Fife, group exhibit, 1, Donald Innes; 2, Percy Marshbank; 3, Robt McKay, Millsville, N S; 4, Robt D MacKay, Balmoral Mills, N S.

CLASS 155.

Spring Wheat, any other variety Exhibit of hand selected seed, 1, W E Palmer, Scotch Lake

Group exhibit, 1, Richard Creed; 2, E E Arsenault; 3, T J Wiggington, Bridgetown, P E I.

CLASS 156

Oats, any white variety, exhibit of hand selected plants, 1, H R Brown; 2, E E Arsenault.

Group exhibit, 1, Donald Innes, 2, Richard Creed; 3, Wm E Palmer; 4, Clinton S Corbett.

CLASS 157.

Oats, any black variety, group exhibit, 1, Ira L Rodd; 2, Jas Marchbank; 3, E E Arsenault.

CLASS 158.

Barley, any six rowed variety, exhibit of hand selected plants, 1, Robt MacKay; 2, Richard Creed.

Group exhibit, 1, Donald Innes; 2, T J Wiggington.

CLASS 159.

Peas, any variety, exhibit of hand selected plants, 1, Robt MacKay.

Group exhibit, 1, Donald Innes.

POTATOES—CLASS 160

Round white type, such as Carman's Nos 1 and 3, 1, H R Brown.

Long white type, such as Empire State, 1, Richard Creed.

Rose type, such as Early Rose, Rochester Rose, Early Northern, 1, Robt McKay.

CLASS 162.

Potatoes, round white type such as Carmen's Nos 1 and 3, 1, C Fred Fawcett, Upper Sackville.

Silver Cup, donated by the Steele Briggs Co., Ltd., Toronto, to the grower making the most creditable showing in Seed Grain, for the whole exhibition. Won by Donald Innes.

CLASS 161.

For new beginners only, Oats, white, any variety, 1, Pearl Patterson, Rockville, N B.

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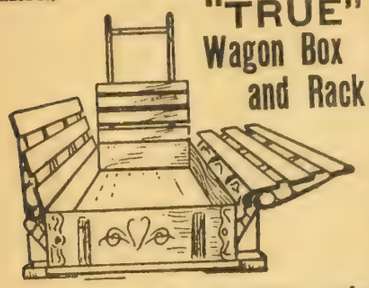
We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges. The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to day.

Address—**MARITIME FARMER, Sussex, N. B.**

Up-to-Date Specialties For Farmers And Gardeners.

Things you need—implements and tools that should be on every truck garden and farm. Our way of making these specialties assures adaptability, strength and service at the minimum price for the best goods of their kind on the market.



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Without wings and ladder, it is a perfect wagon box. With them, it is the best Hay, Stock, Wood, Poultry, Corn or Fruit Rack ever invented. Adjusted to any position in a minute without wrench, hook or rope.

"Eureka" Churn

Barrel of finest stoneware—top of clear pressed glass. Churns by hand lever. The only sanitary churn made. 3 sizes—8, 10 and 12 gallons.

"Eureka Root Cutter

will slice or shred from 1 to 2 bushels per minute. Fastest machine made—easiest running. Tapering cylinder—10 best steel knives.

"Eureka" Combination Anvil

Best iron anvil, with vice, pipe vice and drill attachment, and saw clamps. Just what you need for repairing tools and machinery. Weighs 60 pounds.

The "Bacon" Seed Drill

will handle the most delicate seed without bruising or breaking, and will sow evenly to the last seed.

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Every farmer, who wants to make money out of his farm, ought to have our new catalogue. It shows our TOOLS, Rakes, Hoes and Machines as they are, and describes their construction in detail. Write for free copy.

The Eureka Planter Co., Ltd.
Woodstock, Ont.

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Hewson's Pure Wool Tweeds

F. C. WESLEY CO.

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59 Water Street, St. John, N. B.

Poultry Show at Winter Fair.

(Continued from page 139)

"Gallina Nuda," the hen that was a disgrace to her breed, her owner and the Halifax Exhibition Commissioners, as she was described by a "know it all poultryman" in one of our journals at the time of the Halifax show was one of the winning features of this class. We know a lot of poultrymen who would be proud to own this disgraceful hen, she won well in the hotest class yet. Second and third hens were very close, 2nd won out in shape. There were 7 good hens left unplaced.

Cockerels were the banner section in this class, and the judge had the hardest two hours work of the show to place these in line to his own satisfaction. 1st, was a model of neatness and style, with grand head points, his prominent faults were, a little under size and lack of brightness in surface color, 2nd and 3rd good ones, 3rd had best surface color among the winners, 4th, 5th and 6th were stunning fine birds and deserved their place. There still remained a dozen fit to win at good shows. Pullets put up a great "scrap," 1st, 2nd and 3rd were very close. 1st got the place for being a little the brightest in color. 3rd had the best legs and back in the class, 4th very shapy and clean, but a little open in tail bars, 5th and 6th close up, 20 nice pullets were left out in the cold.

White Rocks were a strong class in quality, 1st cock, 1st hen and 1st cockerel deserve special mention. 1st cockerel was the star of his class.

The Wyandotte females were well represented by White, Buff, Silver, Golden and Partridge varieties. The Whites were a hot class, many former winners going down to defeat because they were not white enough. Judge Smith was out for white quills, feathers and webs in every section. Every bird that showed brassiness or creamy color was returned to the coop with quick dispatch. Buffs were rather a small class, but quality was above the average. Silvers a big class with a few outstanding winners.

The feature of the show was the grand showing of Rhode Island Reds, 44 specimens were in line and not a poor looking one in the lot. The winners were outstanding in their classes.

Another quality class was found in Brown Leghorns. The finest string of 16 males ever saw in a Maritime show. The females hardly the equal of males.

The White Leghorns had some grand stuff, 1st cockerel the gem of his class

Buff Orpingtons presented 37 specimens and they had quality to burn, 1st cockerel was the choice of the lot. White Orpingtons, new comers, 16 white beauties, 1 cockerel and 1st pullet were grand birds.

Black Orpingtons good enough to show anywhere, Dorkings, Houdans, etc., were out in good numbers. Black Minorcas, Single and Rose combs were a choice lot, many of them made their first appearance in this province.

A new class and feature was the double mating pens of Barred Rocks and Brown Leghorns. Competition was keen, and they proved a success and an addition to the show from an educational stand point.

Utility pairs and pens were out as strong as ever. Water fowl and turkeys had the largest class for years. Geese especially were fine. Turkeys the best yet. Dressed poultry did not come up to the expectations in number or quality. This seems to be the only department that does not improve each year.

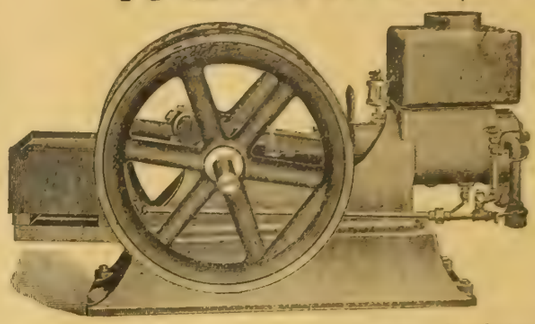
All the big breeders of the Maritime Provinces were out in force and some new ones made a good impression.

From New Brunswick among the prominent, were Seth Jones, Walter McMonagle & Son, Percy Gunn and Thomas Kyle, of Sussex; J. V. Jackson, George H. Seaman, R. A. Knight, of Moncton. Nova Scotia was ably represented. I. C. Craig, Wm. Robinson, R. M. Jackson, Messrs A. C. Reid, Blair, Henry Call, Harrison and many others. Competition has got to be so keen in the popular varieties that none of the breeders made a clean sweep of all firsts except in one instance, those being White Leghorns. Everybody voted the show as being the most successful and harmonious affair of its kind down to date.

WE WANT AGENTS RIGHT AWAY

In every section in the Maritime Provinces where a gasoline Stationary engine can be sold. The one we have to offer, which appeals most to farmers, is the

"Waterloo Boy"



Frost Proof Stationery Engine.

These Waterloo Engines are well and substantially constructed of the best material, by skilled mechanics, and are so durable that the makers have no hesitancy in extending to users their five years' guarantee. Engines are built on the interchangeable plan, all parts being made from jigs and templates, each and every part of the same kind being perfect duplicates, so in future years repairs that may be required can readily be placed without delay.

All the working parts are exposed to view and the duty of each part is readily understood by the user of the engine. The construction of these engines is such that they combine great strength and durability, yet it has been the manufacturers constant study to do away with all extra parts and simplify the construction as much as possible.

If you are looking for a good, reliable and up-to-date gasoline engine to handle—one which sells itself and leaves you a fair margin—write to-day for particulars.

Empire Cream Separator Co.,

Eastern Warehouse—SUSSEX, N. B.

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—cattle make better beef—Bulls are no longer dangerous when dehorned with the
KEYSTONE DEHORNER.
Cuts 4 sides at once—No crushing or bruising. Little pain. The only humane method. Write for free booklet.
R. H. McKENNA
219 Robert St. Toronto, Ont. Late of Picton, Ont.

FLORICUL[illegible]TURE.

All inquiries in this depa[illegible]rtment will be an[illegible]
red by H. E. Goold, Floris[illegible]t, Sussex, N B

E. M., of Rothsay, [illegible]N. B. writes :
Would you please tell [illegible]me what to do
ith a little Lace Cact[illegible]us? It has been
the earth since the [illegible]latter part of
ugust, I thought it h[illegible]d rooted but it
oes not seem to have [illegible]any roots al-
ough the top is nice [illegible]and green. I
ave two Hoya slips t[illegible]hat have been in
he earth about the sam[illegible]he length of time
s the Cactus and the [illegible]rootlets are very
iny, but the leaves ar[illegible]e about the same
s when planted. Wh[illegible]at had I better do
with them? I scraped [illegible]the dead part off
he Cactus roots. I [illegible]have lost several
Chinese Primroses; [illegible]they rot off first
above the earth. I [illegible]have put matches in
he earth, what els[illegible]e can I do?

The Cactus will [illegible]undoubtedly root in
ime if the soil be [illegible]well drained and only
fairly moist. D[illegible]rainage is most essen-
tial where soil i[illegible]s used. You did rightly
to remove the [illegible]decayed roots from the
Hoya, or wax pl[illegible]ant. It also roots slowly,
especially dur[illegible]ing the winter. The
period of gro[illegible]wth usually commences
during the m[illegible]onth of March, when, if
alive, your cu[illegible]ttings will probably take
hold. Keep [illegible]them moist and see that
the drainage [illegible]is good.

I fancy t[illegible]hat you have rooted the
Primrose by [illegible]watering over the crown of
the plant, w[illegible]ater should never touch the
centre of a [illegible]Primrose but be applied
around the [illegible]edges of the pot. I am
afraid that [illegible]if your plants have started
to rot off th[illegible]ey cannot be saved. I do
not think [illegible]hatches will help much. I
would not u[illegible]se them.

A MARIT[illegible]ME Reader says:
Can you [illegible]tell me when a plant that
looks som[illegible]ething like a balsam, with
leaves tha[illegible]t are rose like and a bright
pink flowe[illegible]r that has a tail like a Nas-
turtium c[illegible]an be obtained and how it is
grown—wh[illegible]ether from seed or cut-
tings,—and[illegible] where such can be obtain-
ed? I have[illegible] heard it called Siberian
Rose.

Ans.—Th[illegible]e plant referred to is evid-
ently the [illegible]Lmpertuns Sultana, the
seed of wh[illegible]ich can be obtained from all
seedsmen. [illegible]If sown now they will pro-
duce plants[illegible] that will bloom the balance
of the year[illegible]. If carefully treated, these
plants are [illegible]very easily grown and quite
showy and [illegible]it is a wonder that they are
not more so[illegible]ught after.

H. A. W. [illegible]of Chatham wants to know
how to repo[illegible]t Primroses.

In repottin[illegible]g Primroses and in dividing
old plants o[illegible]f this family, trim up the
bottom leave[illegible]s closely and if they are a
little shaky i[illegible]n the pot, it will not hurt
them, as the[illegible]y will soon establish them-
selves. Wa[illegible]ter very moderately after
repotting a[illegible]nd keep well shaded for a
few days.

Sword Fe[illegible]rns do not require so much
root room as[illegible] most ferns and if repotted
and over w[illegible]atered will quickly loose
foliage. If [illegible]Hyderangias are strongly
cut back in A[illegible]utumn, most of the bloom
buds will be[illegible] destroyed as the bloom
buds are large[illegible]ly formed on or near the
matured shoot[illegible]s, Prune these plants in
summer by pir[illegible]ching back, then you ac-
complished the[illegible] pruning in time for the
buds to form i[illegible]n autumn.

Obje[illegible]ct of Pruning.

1. To modif[illegible]y the vigor of the plant.
2. To produc[illegible]e large and better fruit.
3. To keep t[illegible]he plants or trees with-
in manageable [illegible]shape.
4. To change [illegible]trees from wood bear-
ing to fruit bear[illegible]ing, and vice versa.
5. To remove [illegible]superfluous or injured
parts.
6. To facilitat[illegible]e spraying and har-
vesting.
7. To facilitate[illegible] tillage.
8. To train the[illegible] tree to some desired
form.
9. To remove [illegible]parts badly infested
with insects and di[illegible]sease.

The above point[illegible]s will make us see the
importance of p[illegible]runing and pruning
right; far more [illegible]than we generally
realize and practic[illegible]e.—"Southern Fruit
Grower."

AFTER DRUGS FAIL== I'LL CURE YOU.

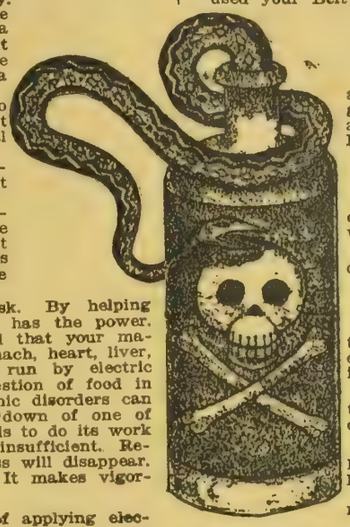
Go try them all; drugs, dope, patent nostrums and doctor's concoctions, and after you have found by experience that none of them will help you, then come to me and I'll cure you, Nature's way.

I've quit asking people to come to me first; to do so would save them many a dollar and lots of useless suffering, but experience is the best teacher and the only thing that will really convince a skeptical mind.

The time is near when doctors who use drugs will have to abandon that system of treatment for the natural treatment, electricity.

Why, there's Prof. Osler, a world-famed scientist, who said recently that most drugs are worthless.

Dr. Albert Leffingwell, of the American Humane Association, says that the average length of human life would not be diminished by an hour if all the drugs of Christendom were dumped into the sea—barring, perhaps, half a dozen.



How does electricity cure, you ask. By helping Nature. Nature will cure you if she has the power. Electricity is that power. Understand that your machinery is run by electricity. The stomach, heart, liver, kidneys and digestive apparatus are run by electric energy, which is created by the digestion of food in the stomach. Most sickness and chronic disorders can be traced to the failure or breaking down of one of these organs. The reason any part fails to do its work is because its supply of electricity is insufficient. Restore that force and pain and sickness will disappear.

Electricity is nerve-food—nerve-life. It makes vigorous men out of weaklings.

I have the only successful method of applying electricity. It has taken me twenty years to perfect my appliance, and I know what I can do.

My Electric Belt is worn while you sleep. Just put it on and turn on the current. There is no shock or burn; the only sensation is a soothing glow.

I have testimonials from people all over the Dominion, who have found health in my treatment. You won't believe these letters, but they are bona fide.

Dear Sir,—I write to let you know that your Belt has cured me, and I am entirely satisfied with your treatment. I then gave it to my sister to wear, and she, too, was entirely cured, after being treated by many different doctors, and also being told that she would have to go under an operation, to which she would not consent. She used your Belt and was entirely cured.

JOHN W. THIBAULT,
Bruce Mines, Ont.

Dear Sir,—I have worn your Belt for a month, and find that it is doing me great good. My stomach trouble is better, and I also feel stronger in every way. I am well pleased with the Belt.

Thomas Copeland,
Lakefield, Que.

Electricity is a lot cheaper than a course of drugging, besides it cures where drugs don't.

Call or send for my free book, read it over and then use your own judgment.

I GIVE IT FREE !

Get my 84-page book describing my treatment, and with illustrations of fully developed men and women, showing how it is applied.

This book tells in plain language many things you want to know and gives a lot of good, wholesome advice for men.

If you can't call, I'll send this book, prepaid, free, if you will inclose this coupon.

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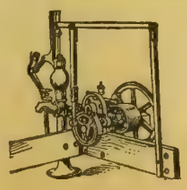

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Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application TELEPHONE 1905.

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Marble and Granite Dealers
Queen St. Truro, - - N. S.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

SHORTHORN BULLS FOR SALE.—WALTER B. EATON, Upper Canard, Kings Co., N. S.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. MCLEAN & SONS, Hopewell, N. S.

FOR SALE CHEAP.—13 foot Ideal Wind Mill. Slightly used but in first class condition. J. D. FRIER, Sussex.

FOR SALE.—A 2,000-pound 20-century De-Laval Cream Separator. Write J. D. FRIER, Sussex, N. B.

FOR SALE, CHEAP.—One two-horse treadpower, slightly used; as good as new. Write J. D. FRIER, Sussex, N. B.

MARITIME REAL ESTATE CO., Sackville, N. B., are making up their new lists of "Farms for Sale", parties wishing to buy or sell, please write.

4 BLK. HAMBURG HENS 1 COCKEREL, $4.00. 3 Light Brown pullets 1 cockerel, $4.00. 1 S. C. B. Leghorn cockerel, $1.50, ROCKWOOD POULTRY YARD, St. John, N. B.

HOLSTEIN BULL FOR SALE at a bargain. Four years old, registered, winner of several prizes. For full particulars and pedigree address D. R. NICHOLSON, Coxheath, Nova Scotia.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

FARMERS.—We are buyers of dressed pork, poultry, fresh eggs and want prime quality goods. Small or large shipments. Prompt returns.—JOHN HOPKINS, St. John, N. B. Established, 1867.

WANTED.—Married man, with some knowledge of poultry and incubators, to care for small flock of pure breds, also be able to care for horses and milch cows. House and vegetables supplied. Address, giving age and particulars, P. O. Box 331, St. John, N. B.

WANTED.—Persons to grow mushrooms for us during Fall and Winter months. Waste space in cellar, outhouse or barn can be made to yield $15 to $25 per week all Winter. Send for illustrated booklet and full particulars.—MONTREAL SUPPLY CO., Montreal

WANTED.—Poultry of all kinds to be exhibited at our January show. Send for free booklet, giving list of prizes and valuable information.—WESTMORLAND POULTRY & PET STOCK ASSOCIATION, Moncton, N. B.

"Agents make BIG MONEY SELLING "VOL-PEEK" Granite Cement. Mends holes in Graniteware, Iron, Agate, Tinware, etc. Mends a hole in 1 minute. Every housewife buys. Greatest seller on the market. Agents make over 100 p. c. profits.—V. NAGLE, WESTMOUNT, QUE.

WANTED.—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W. A. JENKINS' MFG., CO., London, Ont

POTATOES.

It never pays to rush the fall market in potatoes, especially when Cold Storage is at hand for overcoming the ordinary shrinkage in store. We can quote on straight storage or on bulk receipts, barreled, stored, stowed and delivered to steamer or car, as ordered. Write for our proposition.

The New Brunswick Cold Storage (Limited), 672-690 Main St. ST. JOHN, N. B.

For Sale.

1 pr. fine S. C. Buff Orpingtons; 1 pr. S. S. Hamburgs; also 1 good pen S. S. Hamburg chickens; all bargains to clear, also some of the best S. C. R. I. Red Cockerels in the Province, $1.50 to $3.00 each. All A1 stock. Satisfaction guaranteed.

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HOME WORK.

$7 to $10 Per Week.

We want reliable parties to knit for us at home whole or spare time. We furnish machine yarn, etc. Send your name and address at once for full particulars.

The Canadian Whoesalle Distributing Co., - - Orillia, Ont.

Healthy Stables.

Just now there is considerable agitation throughout Canada or in fact throughout the entire sivilized world about the alarming increase of consumption or tuberculosis, commonly called the white plague. This agitation is no doubt well founded, but methinks I hear somebody say what has that to do with agriculturists? Well, perhaps it has nothing to do with agriculturists but they have a duty to perform in helping to stay the dreaded disease in the animal kingdom, which may be a step towards its prevention among humanity.

All medical men are agreed that sunlight and pure air are most necessary for the patient to have in order to effect a cure for tubercular trouble or even to prolong life. If that is the case with human beings that are constantly moving around indoors and out, how much more is it necessary to apply this remedy or prevention to our cattle, many of which are tied up all winter long or nearly half their lives for the purpose of supplying the human race with milk and meat? Now, lest I be misunderstood, I do not wish to put the whole animal kingdom as equally important with the human race, only in so far as neglect of the animal health is likely to affect human health.

I am very strongly of the opinion that dark, dingy, ill ventilated stables are largely responsible for tuberculosis in cattle. As to what effect that has on the meat or milk from such animals when consumed by human beings I am not in a position to say, but I have my opinion. As this is the season for renovating old stables and building new ones I would urge upon anyone contemplating making such changes to put in all the light possible, as well as some system of ventilation. It need not necessarily be an expensive one. However, do not rely upon doors and windows for such ventilation, as it is difficult to so arrange it without throwing drafts upon certain ones of the stock. Build your walls hollow, you will find it much warmer and drier than solid walls, and no more expensive.

It is a good plan to have your window sash made for double glass about half an inch apart. This will make your stable warmer and will give better light in cold weather as the glass will not frost over.

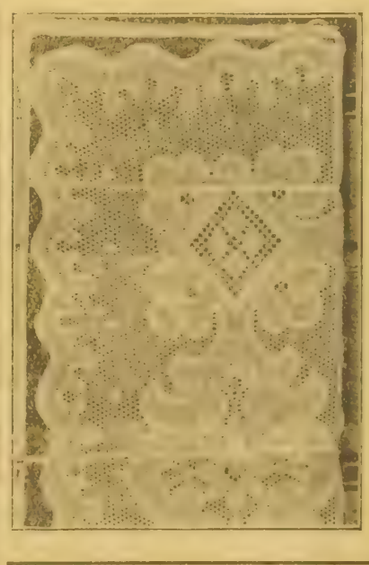
It is important for the health of the animals as well as for the lifetime of the stable that roots are not kept in the stable. This is easily arranged by placing the root cellar under the driveway, and when properly built of cement throughout it should last a lifetime. Another thing that can be conveniently built in the driveway is the water tank. It can be kept high enough to allow the water to run to the drinking fountains in front of the cows. When built of cement and covered up securely it should last indefinitely.—Farm and Dairy.

Parlee Auction Sale Cancelled.

The auction sale of pure-bred Ayrshire cattle which was advertised in our first December issue by Mr. M. H. Parlee, Lower Millstream, N. B., has been cancelled, as the animals offered for sale have been disposed off by private sale to Mr. R. R. Ness, Howick, Quebec, who, we understand, will take them to some part of the West. While in Sussex last week, Mr. Ness also purchased some good ones from McIntyre Bros.

Turnip Taste of Butter.

"The milk from cows fed on turnips has a peculiar odor and taste," says H. Weigmaun. "Apparently some volatile product from the turnips gets into the body fluids of the cow and thus affects the milk. This fault may be corrected by warming or aerating the milk. But besides this, certain organisms, as coli bacteria, Actinomyces odorifer, Penicillium brevicaule and lactic acid bacteria, which are found in the feces of cows fed on beets or turnips, also produce the turnip flavor and aroma in butter made from milk or cream in which they are present. The turnip taste of butter may be due to both of these causes together. Butter may have the turnip flavor and aroma, however, even when no turnips are fed, as coli bacteria, causing the taste, are found also on oats, barley, corn, rape and other feeding stuffs. Pasteurizing the milk, with subsequent aeration, is recommended as a means of preventing the development of the turnip flavor in butter."



Handsome Premium

A pair of these Handsome and durable **Lace Curtains**, 3 yards long by 42 inches wide, together with a new or renewal subscription to the MARITIME FARMER, post paid, for **$1.40** or for **Two New Subscribers** at 80 cents per year.

The Maritime Farmer, SUSSEX, N. B.

THE MARITIME FARMER

AND

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

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Stock Raising and Soil Fertility.

By Prof. M Cumming, Truro, N. S.

STOCK farming is the only kind of farming that will maintain the land in its virgin productiveness. On a properly managed stock farm the soil should be even more productive after a hundred years of farming than when the first furrow was turned. This cannot be said of hay farming or grain farming, or, in fact, of any kind of farming in which the crops raised are sold off the farm in their crude form. The cause of many an impoverished field and run-out farm in the Province of Nova Scotia can be readily traced to the easy method of selling hay and oats, instead of feeding these, with other farm produce, to various classes of live stock, whose products or themselves, when sold off the farm, remove so little fertility as compared with the fertility removed under the hay or grain farming systems.

SELLING FERTILITY.

Every crop grown on the farm has a value as a fertilizer and, when sold, permanently removes that amount of fertility from the farm. If the crop is fed on the farm and the manure properly saved and returned to the fields, this great loss of fertility is largely checked. And if, as is usually the case, other feeds, like bran, middlings, oil cake, etc., are bought and fed and the manure applied to the fields, farms will actually become richer and richer from year to year.

HOW TO CALCULATE THE LOSS OF FERTILITY.

In the table submitted below there is presented the amount of nitrogen, phosphoric acid and potash contained in a ton of the ordinary crops grown, as well as of the feeds purchased on the average Nova Scotia farm. Those who are familiar with questions relating to soil fertility will know that these are the three important elements contained in the commercial fertilizers which are being bought in increasingly large quantities in the Province. In the form of commercial fertilizers, according to last year's prices, we pay for these as follows:

Nitrogen.....20 cents per pound.
Phosphoric acid.....07 "
Potash.....05 "

MANURIAL VALUE OF FODDERS.

Fodders	Pounds contained on one ton.			Manurial value per ton.
	Nitrogen.	Phosphoric Acid.	Potash.	
Timothy hay	25.2	10.6	18	$ 6.68
Red clover hay	41.4	7.6	44	10.99
Mixed meadow hay	28.2	5.4	31	7.57
Oats	41.2	16.4	12.4	10.10
Barley	30.2	15.8	9.6	7.59
Corn meal	36.4	14.0	8.0	8.66
Wheat	47.2	15.8	10.0	11.04
Buckwheat	28.8	8.8	4.2	6.59
Wheat Middlings	52.6	19.0	12.6	12.48
Wheat bran	53.4	57.8	32.2	16.35
Cottonseed meal	135.8	57.6	17.4	32.06
Linseed oil cake meal	108.6	33.2	27.4	25.41
Gluten meal	94 to 126	6.6	100—	23.17 to 29.57
Oat straw	12.4	4.0	24.8	3.90
Barley straw	12.2	6.0	41.8	7.75
Wheat straw	11.8	2.4	10.2	3.04
Potatoes	6.2	2.4	9.2	1.87
Turnips	3.8	2.4	9.8	1.42
Mangolds	3.8	1.8	7.6	1.27
Cows' milk	10.6	3.8	3 6	2.57

The calculation of the manurial value per ton presented in the last column, is a simple matter. For example, a ton of timothy hay contains 25.2 pounds nitrogen, 10.6 pounds phosphoric acid, and 18 pounds potash,

The value of these at the above figures is:

Nitrogen—25.2 lbs., at 20c.....$5.04
Phosphoric acid—10.6 lbs. at 7c..... .74
Potash—18 lbs., at 5c..... .90

Total.....$6.68

This means that it would cost a farmer $6.68 to pay the equivalent, in the form of commercial fertilizer, of the amount of fertility which he sells in a ton of timothy hay. The manurial value of other feeds and products tabulated has been calculated in the same way, so that anyone, by the use of these tables, can calculate how much fertility is being sold with every load that leaves the farm, and how much is being bought with every load that comes to the farm.

NOTE.—By many it is considered that to put the same valuation on the nitrogen, phosphoric acid and potash contained in barnyard manure as in commercial fertilizers is to put too high a valuation on barnyard manure. Some would value these ingredients at 2-3 of their value in commercial fertilizers, in which case the figures in the last column of the above table, representing the value of fertilizing ingredients per ton are too high and should be reduced one third. For example, the value of Red Clover Hay, as a fertilizer is placed in the table at $10.99. This would be reduced to 2-3 of $10.99=$7 33. However that may be, the same principle remains that every fodder has a high manurial value. For convenience, we will retain the former figures, but any of our readers, to be on the safe side of the calculation may reduce these by one-third.

WHAT DOES THIS MEAN TO NOVA SCOTIA?

In the greater part of the province of Nova Scotia no one product is sold off the farms to such an extent as hay and, more particularly, timothy hay. The price received has, of late years, varied considerably. However, it is not very often that the farmer receives more than $10.00 per ton. When one considers that he is selling with each ton of hay the equivalent of $6.68 worth of fertilizer, one readily sees that he is not only doing his soil an injustice, but is receiving a very small margin ($10.00—$6 68 = $3.32) with which to pay cost of harvesting, storing and hauling, as well as the interest on his investment.

COMPARISON OF HAY WITH OATS AND POTATOES.

Assuming that a field that would produce 2 tons of timothy hay would produce 50 bushels of oats and 1 ton of straw, or 150 bushels of potatoes; and valuing hay at $10.00 per ton, oats at 50c. per bushel, oat straw at $5.00 per ton, and potatoes at 40c. per bushel, we arrive at the following figures, which the reader can easily verify by reference to table on Manurial Value of Fodders:

Crop.	Yield per acre	Fertility removed per acre	Market value of crop	Market value exceeds fertility value by
Timothy hay	2 tons.	$13 36	$20 00	$ 6 64
Oats	50 bush.	8 59	25 00	16 41
Oat Straw	1 ton.	3 50	5 00	1 50
Oats and Straw		12 09	30 00	17 91
Potatoes	150 bush.	8 41	60 00	51 59

The readers might change the market valuation or the relative yields per acre, but, whether he does or not, he will find that, in proportion to the price received, hay removes more fertility from the land than any other crop grown. We have, moreover, not taken into consideration the valuable matter, i. e., humus matter, which is also received by these crops. It is difficult to put an exact valuation on this compound, but everyone who has farmed knows that humus is indispensible to a good soil. Of the above crops, timothy removes, by far, the most humus; oat straw comes next, and oats and potatoes remove comparatively little per acre. Whichever we may consider the matter, it is, therefore, apparent that the selling of hay is the most exhaustive of fertility; the selling of oats less so, more particularly when the straw is left on the farm; and the selling of potatoes but slightly exhaustive, and yet, throughout the greater part of Nova Scotia, the standard crop sold off the farm is hay. Need anyone wonder that there are run-out farms and deserted homes.

HOW TO OFFSET THE LOSS

The only practical way to offset this loss is by feeding the greater part of the farm product to stock and marketing milk, butter, cheese, beef, poultry, eggs, pork, horses, etc. In feeding animals farm crops or purchased foods, the greater part of the fertilizing value of the fodder is recovered in the manure.

The exact amount depends upon the age, condition and kind of animal, as per following table :

Kind of animal	Percentage fertilizing ingredients retained in Animal body.	Percentage fertilizing ingrediends voided in the manure
Young growing animals	About 50%	About 50%
Milch cows	" 25%	" 75%
Fattening cattle	" 5 to 10%	" 95%
Matured horses	" 5%	" 95%
Fattening pigs	" 15%	" 85%
Fattening sheep	" 5%	" 95%

In the above table it will be noticed that, with the exception of young, growing animals, the dairy cow takes the greatest amount of fertility out of the fodders consumed. If, however, the cream is separated and the skim-milk retained on the farm, no more fertility will be sold off the farm than when beef is sold, viz about 10 per cent. The advantage of selling butter or cream instead of whole milk is, therefore, quite apparent.

Averaging up the whole table, we may say that from any farm on which a miscellaneous collection of stock is kept, the amount of fertility removed need not exceed above 10 per cent that which would be removed under the hay and grain systems of farming. The important problem that remains is, how can the farmer get the 90 per cent voided in the manure on his fields without further loss? The solution of this depends upon the care taken of the barnyard manure, which is subject to great loss from two sources, viz., leaching and fermentation. To prevent the former he must prevent the running away of the liquid manure. To prevent the latter, he must keep the manure from heating. And to prevent both, he may take as his general guide the getting of the manure on the fields as soon as possible after it is made,

AN INSTANCE.

Suppose that a farmer, instead of selling the two tons of hay produced on an acre of land, as above, feed it to his dairy cows, marketing therefrom only butter and pork. The two tons of hay, as above, contains $13.36 worth of fertility. There will be sold with these about 10 per cent of the fertility in the hay, leaving $12.03 worth of fertility on the farm Of this amount, the equivalent of at least two-thirds will reach the fields. To this should be added the value of the vegetable matter or humus in the barnyard manure, a value which we can scarcely quote in figures, but which constitutes, in the main, the superiority of barnyard manure over commercial fertilizers. The same principles can be applied to all the other fodders, and in every case it will be found that, from the standpoint of soil fertility, it pays to feed all fodders, except those for which the market prices are much in excess of their fertilizing value, on the farm.

BUYING FEEDS.

In buying feeds it is well to take these same questions into consideration. Compare, for example the manurial value of one ton of corn, bran, oats, linseed meal cake, and cotton seed meal :

1 ton corn has fertilizing value of			$ 8 66
1 ton bran	"	"	16 35
1 ton oats	"	"	10 10
1 ton linseed oil cake		"	25 41
1 ton cottonseed meal		"	32 06

It is not long since a large portion of the cotton seed meal produced was sold to be applied directly to the land as a fertilizer. Now it is practically all fed to cattle, with the result of not only increasing the milk flow and adding to the flesh, but of increasing the value of the manure heap at the rate of over $20.00 for each ton fed. Note too the high value of bran as a fertilizer. Through the medium of this, much of the fertility of the Western plains is now being transferred to the East. Compare the relatively low fertilizing value of corn with the high value of linseed and cottonseed cake.

Not every farmer keeps an account of his soil, yet it is hard to see how anyone, who accepts the principles laid down in the preceeding paragraphs, can fail to estimate the importance of knowing whether his capital stock of soil fertility is increasing or decreasing, for in this way only can he expect profitable returns from his fields each succeeding year. Just at present our Western farmers are, many of them, ignoring the principles, thinking that fertile Western soils will not become exhausted like those of the East. They will find, however, as many in the older sections have already discovered, that the most fertile of soils can be exhausted of their fertility and they will be driven "nolens, volens" to feeding live stock. In the meantime, the Eastern farmer has no alternative. He must recognize and live up to the principle that "In live stock lies the salvation of Maritime Agriculture."

EDITORS NOTE—We will follow up this subject in next issue by publishing an article by Prof. Cumming on balanced rations. Study the two articles carefully and preserve them for future reference.

Col. H. Montgomery-Campbell,
Apohaqui, N. B.
The new President of the Maritime Stock Breeders' Association.

The Coming Farmer.

EDITOR MARITIME FARMER :

That the present position of the best class of Maritime farmers is a desirable one we gladly claim. They need envy no one. But that the condition of a large part of those living upon our farms is vastly inferior to what it should be, and might be, we are forced to confess. There are many farmers whose active experience extends backward over a period of forty or fifty years. The wonderful changes that have taken place within that time in connection with agriculture alone are hardly realized by them, so gradually has the work of progress been accomplished. Where wide stretches (in many cases) of native forest then met their view, cultivated fields and pleasant homes mark the advance of our genius and civilization.

The rude log cabin of the early settler now stands obscurely in the shadow of the modern cottage as a reminder of the days of small beginnings. Commodious barns and stables indicate the channels into which, or through which, thrift and enterprise have led the prosperous possessor. "Old Brindle" has passed away—although she is to be found in some sections yet—with the primative quarters erected for her comfort, while in the new stables the better bred and more aristocratic Shorthorn, Holstein, Jersey and Guernsey are found. Poor old Brindle, what might you have accomplished had you been quartered in this model stable, fed a balanced ration of roots, clover hay, wheat bran and oil cake, and drank water that had no ice in it.

The farm implements of former days, when muscular developments had a practical meaning, have given way to improvement that lightened labor and made it possible for a boy to do the work of half a dozen men.

The wives and daughters of to-day know little of the peculiar household cares of their grandmothers. The cooking range, the washing machine and clothes-wringer, the sewing and knitting machine, bread and cake mixers, cream separator, factorys for butter making and many other savers of hard work.

Our mothers and grandmothers contentedly and well performed their household duties without the advantages of these modern improvements, and knew little of modern necessary evil—servant girls.

The favored children of to-day seem to be born to a degree of intellectual and scientific advancement, that it would have taken ten years of application in the schools for their grandparents to acquire, while our social and educational advantages as completely overshadow those of the past, as do improvements in any other direction.

An early acquaintance with good books, music, games and recreations in our homes are comparatively new, but strong influences in moulding character and maturing that most sacred element —a love of home.

We cannot believe that the spirit of progress that has blessed the Canadian people in the past will fail to continue its beneficient work; but to expect that the coming fifty years will be as prolific of invention, scientific achievement and intellectual advancements the past fifty years have been, requires a remarkable degree of faith in the unseen.

Farmers, as a class, are prehaps the most difficult to lead out of old, long-travelled ruts and into a trial even of that which is radically new.

They do not contribute largely to that changeful, restless element that would keep society in a constant ferment and under the foundation of governments, even uncertain.

If they are more persistently loyal to political and religious anticedents than most other classes, they are also slow to recognize these lines of thought and action that lead up to the better methods and conditions in their own particular interests.

If the average farmer of the near future can be brought to the general plane of thrift and intelligence, now occupied by the best representatives of the calling, this will be one of the great and political events of the century.

To accomplish this the farmer must be intelligent in his work; he must recognize the fact that to be a successful farmer he must be a succeseful business man. No other occupation calls for closer discernment and intelligent action. The wide-awake farmer is not only a producer, but a manufacturer. He must, therefore, understand the nature of soils, the value and influence of fertilizers and the law that govern plant growth. He must be familiar with the principles of the breeding of farm stock, the general form, characteristics and adaptation of the various breeds of the animals he handles. He must have an intelligent idea of the profits he should derive from the enterprise in which he engages. He must have well defined ideas of the value and effects of feeds, that when combined they may produce required results. He will be a buyer and seller, and as such, should cultivate a ready and correct judgment. He should study the markets, from a consideration of the question of supply and demand, in order to buy and sell at a profit. Instead of being controlled by circumstances, let him aim to be in a position to use them for his advancement. If the successful merchant deserves the title of business man, the successful farmer should have equal claim to the same distinction. The coming farmer will be an active man in public affairs.

Educational, social and political reform must receive a strong support from the farmer.

Such reforms are an absolute necessity to the maintenance and advancement of his interests and only will he prosper as they are fostered.

The common school is coming to be more and more an institution, peculiar to our rural districts, and the general tendency of advanced pupils from these, to seek better instruction in our town and city high schools, has, in itself, an element of danger to the common district school.

Let not the intelligence and wealth of the country neglect the educational interests of the masses because better instruction is available to their favored sons and daughters.

The farm will continue to be the best place in which to rear strong, brainy men and pure, noble-minded women, and though these may not all remain on the farm, but, as in the past, go out to give strength and character to business, intellectual and social circles in our crowded cities. In the future, those who leave the farm will in no sense be superior to those who remain behind.

Farmers, as a class, are apt to settle down to a conviction that their place is on the farm and that they should seldom go very far from it. The consequence of this is that they are liable to become rather cramped in their ideas of the world about them and to settle down to the conviction that what they do not already know is not worth knowing at all and hence continue on in their old routine way of doing things because their fathers did so before them and to become careless of the great improvement going on about them. This isolation is fossilizing in its influence—it deadens enterprise, dulls the intellect and is inimical to progress. How, then, is this tendency to be counteracted? By a more frequent and more intimate mingling together of farmers in clubs, in fairs, in institutes and in any way that presents an opportunity for them to exchange views and to discuss such subjects as are of interest to them as farmers. Not only this, but they should, as much as the interests of their business will allow, mingle with the world about them and be conservant with and take an interest in the world's work. All this would, undoubtedly, pay in dollars and cents and certainly would in enlarging and liberalizing the mind and in increasing the enjoyments of life.

Farmers are beginning to understand that muscular force cannot solve all the intricate problems which present themselves in this complex art. In times past it has been thought to give the son of a farmer an education was to give him a distaste for the labor of the farm. This, undoubtedly, has, to a large extent, been true. Instead of strengthening his attachment to rural pursuits, he has been educated away from them and has sought admission to the so-called "learned professions," because they were more likely to conduct him to honor and distinction. Agriculture has thus been drained of its most promising young men. The only way to remedy the evil is to elevate our profession and make it a learned profession; and no other profession presents a broader field for liberal culture and scientific research than this. In order that the farmers may occupy that position in society and influence to which their numbers and the importance of their calling would seem to entitle them, they should be thoroughly educated for the business of farming and also acquire some of those useful accomplishments which lend to

professional life influence in so great a degree.

The farmer of the future must believe more strongly in himself and his vocation. He must recognize that no social, intellectual or political barriers are raised before him because of his occupation, but that common with other classes, he will pass for what he is worth, but no more.

When in the future our vast country has been developed; when a largely increased and ever increasing population shall demand that our agricultural resources be taxed to their utmost, when thrift and enterprise shall become necessary adjuncts to insure success; no place will be left for the average farmer of to-day, and he will unconsciously give way to the more successful coming farmer.—A. HECTOR CUTTEN, Inglewood Farm, Lower Truro, N. S.

The Maritime Horse Show.

We have just received a copy of the provisional prize list and rules governing entries for the Horse Show, which will be held in the Winter Fair Building, Amherst, N. S., on April 6th and 7th.

There are to be fifteen classes, viz.:—1, Thoroughbred; 2, Standard Bred; 3, Hackneys; 4, French or German Coach; 5, Clydesdales; 6, Percherons; 7, Shires; 8, Roadster Horses, in harness; 9, Carriage Horses, in harness; 10, Saddle Horses; 11, Carriage Horses; 12, Heavy Draught; 13, General Purpose; 14, Agricultural, and 15, Ponies.

Prizes are offered in each of the first seven classes as follows :

	1st	2nd	3rd	4th
1. Stallion, foaled previous to Jan. 1, 1907..	$20	$15	$10	
2. Stallion, foaled during the year 1907.....	$15	12	8	
3. Stallion, foaled on or after Jan. 1, 1908.....	$12	8	6	$4
4. Mare, foaled previous to Jan. 1, 1908....	$15	12	8	
5. Mare, foaled on or after Jan. 1, 1908.....	$12	8	6	4
6. Stallion, any age.....	Diploma			
7. Mare, any age.....	"			

Classes 8 and 9 have the following sections and prizes :

	1st	2nd	3rd
1. Stallion, in harness.....	$15	$12	$8
2. Mare or Gelding, in harness.....	15	12	8
3. Matched pair.....	20	15	10

Class 10 will have the following sections and prizes :

	1st	2nd	3rd
1. Saddle horse, ridden by gentleman.....	$15	$12	$8
2. Saddle horse, ridden by lady.....	15	12	8
3. Leaper, ridden by gentleman	15	12	8
4. Leaper, ridden by lady..	15	12	8

In class 11, conformation, quality and true all round action will be considered. In judging, the horse will count 75 p. c. and the appointments 25 p. c. The sections and prizes will be as follows:

	1st	2nd	3rd
1. Mare or gelding, 15 1-2 hands and over.....	$15	$12	$8
2. Mare or gelding, under 15 1-2 hands.....	15	12	8
3. Matched team.....	25	15	10
4. Tandem	20	15	10
5. Four in hand.....	30	25	20
6. Champion horse, in harness	Silver Cup		
7. Combination Saddle and Carriage Horse.....	Silver Cup		

All horses competiting in class 12 must be the get of a registered pure bred sire, for which the following sections and prizes will be provided :

	1st	2nd	3rd
1. Mare or Gelding, shown in single harness, foaled previous to Jan. 1, 1907...	$12	$ 8	$ 6
2. Mare or Gelding, shown in single harness, foaled on or after Jan. 1, 1907...	10	8	6
3. Team, in harness, Mares or Geldings, foaled previous to Jan. 1, 1907.....	20	15	10
4. Team, in harness, Mares or Geldings, foaled on or after Jan. 1, 1907.....	15	10	8

Classes 13 and 14 will each have sections and prizes as follows :

	1st	2nd	3rd
1. Mare or Gelding, in harness.....	$12	$ 8	$6
2. Team, in harness.....	15	10	8

Class 15 will have sections and prizes for :

	1st	2nd
1. Pony, in single harness, 12 hands and under.....	$ 8	$5
2. Pair of Ponies, in harness, 12 hands and under.....	10	8
3. Pony, in single harness, over 12 hands and up to 13 1-2 hands	8	5
4. Pair of Ponies, in harness, over 12 hands and up to 13 1-2 hands	10	8

RULES GOVERNING ENTRIES.

1. Entry fee, $1.00 per head.

2. Horses entered in classes 1, 2, 3 and 4 may compete in sections for which they are elegible, in either class 8, 9 or 11, on payment of an additional entry fee of $1.00.

3. In classes 8 and 9 horses alone will be considered, but they must be hitched to an appropriate vehicle.

4. Class 10 is open to horses, which are elegible for any other class, on payment of $1.00 additional entry fee.

5. Horses entered in any section of class 11 may compete in any or all other sectons, on payment of an additional fee of 25 cents for each section so entered.

6. Horses entered in classes 4, 5 and 6 may compete in section for which they are elegible in class 12, on payment of an additional entry fee of $1.00.

7. Class 13, General Purpose horses, must be a horse that can be comfortably ridden, driven single or double to buggy or carriage, suitable for all purposes required about a farm; the form of a large carriage horse, but not possessing extremely high action.

8. In class 14 horses must be high class horses of the light draft type, weighing not less than 1,250 pounds.

As this is the first attempt put forth by the Maritime Stock Breeders' Association to institute a Horse Show, Mr. F. L. Fuller, the Secretary-Manager, in behalf of the Executive Committe, will be pleased to receive and consider suggestions that any of our readers might offer. If no suggestions are offered, the above mentioned sections, which are only provisional at present, will likely be approved.

Preserving Farm Tools.

Why do we oil tools? For the simple reason that it doubles the life and easy working of them. This being so, what oil is the best to use, and what is the best way to apply it?

Without going chemically into the roason why, which would take too long to explain, it has been found, from centuries of experience, that, like the old carpenter's rule of "wood to wood, iron to iron," in working tools, the rule of oiling is "vegetable oil to vegetable matter, animal oil to animal matter, metal or stone."

Of the vegetable oils, we have raw and boiled linseed, and castor, from plants; of the animal, neat or bullock's-foot (neat stood for bullock in Anglo-Saxon) oil, and fat or tallow. These are the only ones we need concern ourselves with; the others are of no use to us.

The raw linseed oil is pale yellow in color, and runs easy as water; if dark yellow, and stickey it has been adulterated with cheap fish oil. The extra refined is very good, and veay hard to get; like the boiled linseed. Blundell and Spence's is about the best on the market at present. The boiled oil is naturally much more stickey than the raw, a lot of the moisture having been driven off in the boiling; it is also darker in color than the raw. The difference in the use of these oils is—that the raw oil penetrates the wood-fibres right through, and only forms a skin outside when these wood-fibres can absorb no more of it. The boiled linseed, on the other hand, is too vicious or thick to enter the wood-fibres, and makes a skin on the outside at once. Thus you can see that if you are oiling or painting wood for yourself (paint is only white or red led mixed up with oil and coloring matter), use the best raw linseed; and, if doing a cheap job for someone else, use only the boiled; the wood will soon decay as the boiled oil skin wears off, but that is none of your business.

The neatsfoot oil, when absolutely pure, is white; but is never sold so in the shops, being a pale yellow. You tell it from linseed by the smell. If you want the real "Mackay" you must square your butcher for it; but good shop oil is all right.

It is unnecessary to describe castor-oil; we have all made its acquaintance at some time or other; its only use is to oil machinery, being cheaper than neatsfoot. The best way to handle these oils is to buy a drum of each; then get four sound old drums, fix a small brass tap on each, near the bottom, and put them on a stand about 3 feet from the ground. You will then be able to use the oil to the last drop without waste; you can get a rebate on the new drums, or keep them for whim or pig buckets.

Now, to apply these oils. First, the linseed. For oiling handles of any sort, take an empty golden syrup or jam tin, see that it is perfectly clean and dry, and half fill it with your raw linseed; stand your handle or handles in it, and leave them there for a couple of days. Then reverse them in the pot, and, after a couple of days, take them out and give them a rub over with a raw linseed oily rag. They are now fit for use, will spring well, and stand the weather with impunity, if the wood in them is any good at all.

You oil planes differently. For the tryer, jacks and smoother, you first remove the wedge and iron. Now block the bottom of the opening (or 'mouth') of the well, as carpenters call it, securely with putty, and pour raw linseed oil into it till almost full. Leave it for a couple of days, and you will find that the thirsty beech has drunk up all the oil. Fill her up again and she will soak up about half of that. When you find she will drink no more, pour the rest back into the drum, remove the putty, clean, and she is ready for work. If you want a pretty plane, rub the sides and top well with the oil also; she will then look as if she had been polished. If likely to get rough treatment, give her sides and top a coat of boiled oil all over; this saves planes wonderfully. For other planes, leave them in a billy of oil for a couple of days, first removing the iron (the wedge wants oiling as well). Then rub them on the sides, and they are ready for work. There is a tradition amongst shopkeepers that all tools and handles are well boiled before they leave England. If so, that oil takes care to escape on the way out; gets licked out in the Red Sea, perhaps. Iron planes, of course, you do not oil at all, except the bed or wearing surface. You must keep on giving this a dab with raw linseed or, preferably neatsfoot oil, or you will not be able to work it at all.

To apply neatsfoot: You must keep a little oil can full of it on the bench; when your oil-stone will not bite, or your saws cling, or feel a bit rusty, flirt a few drops on as needed. Grease or fat will answer the same purpose, but is not so good.

Keep Betler Hours.

Life on many of the farms is not a pleasure as it might be. The family rise very early. A long strenuous day is passed in field and at night after supper the men work in the barn doing chores until a late hour, the women in the house preparing for another day. Too tired to read or to talk all seek their beds as soon as the work can be left to be ready to repeat the process on the coming morrow.

These people know no joy of living as they should, and they rarely ever prosper financially any better than do others who do less work. A ten hour day in the fields with two or three hours doing chores morning noon and night is more than any one can do and do their best work. When the body is unduely jaded the mind will not work quickly. Many unnecessary steps and hard boosts are taken because the mind has not planned the work ahead.

There are dollers to be gained by read-the farm paper and learning what other farmers all over the country are doing. A farmer should keep posted on market and crop reports. It is a part of his business. He must take some time in which to do this and it is time well used. He must not be unduly tired if he would read intelligently and gather the kernel of what he reads for his own use.

Work should be done by seven o'clock—six if possible. The evening should be given to the family circle, reading, making up accounts, which are sadly neglected to the farmers' loss on most farms, and keeping acquainted with the family, about which some men know less than do their neighbors. The boys and girls will be less likely to leave home as soon as of age if the parents spare a little time to cultivate their acquaintance.

Think it over, you men who come in from the barn at nine o'clock and go straight to bed. Try the other method a while and see if it doesn't make life happier and business better.

Breeding Questions.

Subscriber writes:—Suppose A. has a thoroughbred Durham bull and B. has a thoroughbred cow of the same breed would it be possible to get a thoroughbred calf if B. should breed his cow to A's. bull about ten minutes after A. had bred his bull to a scrub cow. Would the bull have anything in taking from one cow and putting the same to another. Suppose A. had a thoroughbred Clydesdale mare and the first colt she had was from a Percheron horse. Her next foal was by a thoroughbred Clydesdale horse. Would colt No. 2 have a tendency to take after colt No. 1, or stallion No. 1 and interfere with it being a thoroughbred Clydesdale colt;?

In reply to Subscriber's questions re breeding. I suppose when he refers to a bull or cow as thoroughbred that he means purebred as there is not any thoroughbred bulls or cows. Thoroughbred is the name of one breed of horses and no other animal is entittled to use it. Therefore I will use the word "purebred". If B. breeds his pure bred Shorthorn cow to A's purebred Shorthorn bull and secure a calf from such mating it would be a pure bred Shorthorn calf no matter how many mongrel cows the bull may have served nor how short or long the time between. If A's purebred Clydesdale mare was bred to a purebred Clydesdale stallion and a foal secured from the mating, it would be a purebred Clydesdale foal regardless of how many foals the mother may have had from Percherons or any other breed or mongrel stallions. J. STANDISH, V. S.

Physicky Horse.

Can you tell me through "The MARITIME FARMER" what to do for a horse that physics when driving? The horse is not fed very highly and is not bothered with the looseness except when driven.

ANS.—Some horses, of nervous disposition, physic very readily when driven. Horses may also physic if driven shortly after being fed. Drive your horse gently so as not to incite nervousness and see that he is fed so that sufficient time will elapse for a partial digestion of food before the horse is driven. Do not drive the horse when his stomach is full.

READER, Bass River, N. S.

Medicines that aid nature are always most successful. Chamberlain's Cough Remedy acts on this plan. It loosens the cough, relieves the lungs, opens the secretions and aids nature in restoring the system to a healthy condition. Sold by all dealers.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farme of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

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The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

JANUARY 25, 1910.

Dates of Issue.

February.....8-22
March.....8-22

ENGLISH YEOMAN'S TOAST.

"Let the wealthy and great
Roll in splendor and state,
I envy them not, I declare it;
I eat my own lamb,
My chickens and ham,
I shear my own fleece and I wear it.
I have lawns, I have bowers,
I have fruits, I have flowers,
The lark is my morning alarmer;
So my jolly boys, now,
Here's God-speed the plough,
Long life and success to the farmer."

THE BALANCED RATION.

The short course students who listened to Prof. Cumming's lectures on "Dairying," particularly the parts of the lectures which dealt with the questions of Balanced Rations and the Manurial Value of Foods were loud in their praise of the insight they had received into these matters. Professor Cumming as secretary for agriculture had two very educative articles on the above questions in his report for 1909. The articles in question were worded so that any person of average intelligence might understand them and work out a balanced ration from the foods within his reach. In buying feeds to supplement other feeds in making up a balanced ration, the manurial value of such a feed should be taken into consideration as well as the various food elements that they contain, and it not infrequently happens that a food rich in, say, protein, is of high manurial value and although it may be the most expensive feed on the list its dual value as a food and its high percentage of manurial value may make it the most economical feed to buy. In this and succeeding issues we will publish the articles referred to as thep appeared in Professor Cummings' report, so that those of our readers who did not attend the short courses may be benefited thereby. Preserve and study these articles, apply them in actual practice and we know you will glean satisfactory results.

We would like to urge upon farmers and farmers' sons, who have never followed a balanced ration system of feeding, the advisability of adopting the practice as soon as possible. If anyone should feel skeptical re the matter, start the system by experimenting with one cow and we feel quite sure all skepticism will fade away and the whole herd will be brought under the more profitable feeding system. Why not let your boy take an interest in this matter by letting him conduct the experiment and watch the results?

THE PROBLEM OF COUNTRY.

In country life the winter months are pre-eminently the educational season of the year. All of our organizations devoted to the promotion of special branches of farming hold their principal annual meetings during these months. These gatherings have all been held as usual the past winter. They have been well appreciated, have called out a full attendance, and no one can question but they have exerted a powerful influence, each in its particular line of effort. Farmers need these things, but at the same time the question arises, whether these organized efforts have not been too much confined, or too closely directed, to an education having for its object an increased production. It is not all of farm life to make more butter, raise more fruit and lay by a few more dollars above the necessities of life. This is all desirable, but country life goes with these productions, and we contend calls more loudly for aid in its object the growing of two blades of grass where but one grew before.

The education of rural life in its rural setting is a matter which may well receive, and certainly may properly claim, a large measure of attention from our organizations related to country affairs. It was none too early that our President of the United States directed attention to the standing of country life and while no striking results may directly appear from the movement, yet it cannot fail of directing increased attention to that which has heretofore been more or less neglected. It is the sentiment back of the life in the country that now specially calls for culture, rather than increased production. This is the "rural progress" now most needing attention, and, any or all of our organizations in the interest of country affairs can do no more useful work than for a time to direct their efforts to elevating the standard of life around us.

THE FARMERS' INSTITUTE SEASON.

It must not be forgotten that the Farmers' institute season is now in its height of action and usefulness. The rush of other interests, the finishing up of the fall farm work and the preparation for winter, the excitement, etc., usual to the holiday season, all tend to divert from the study and preparation necessary to keep up with the present day institute work.

The farmer's institute is the greatest helper in agricultural training that is now employed among the people. It is available in the right place and at the right time to give the needed encouragement for reform and improvement in agricultural matters. It is this farmers' institute education and training that is going to supply the country with high-class farmers for the future. The institute prepares the boy for the agricultural college and the agricultural college prepares him for the intelligent and scientific management of the farm.

The institute fair or show is a feature that merits the encouragement of the older members and managers of the farmers' institute. The sooner the boy becomes a patron of the agricultural fair the surer you are of having him tied to the farm. It is the personal interest that must be cultivated into the boy, in his relation to the farm, that is of greatest importance in cultivating an attachment for the farm. Get the boy interested in the farm. This can be done by giving him a share in the production of some branch of the farm crops or live stock. The boy must see results, must share in those results, must have a tangible interest that has a money value to it.

The farmers' institute can do much to cultivate a better relation between the boy and the farm. This is important now, since there is a scarcity of help to handle the farm work. Devise some plan to make the farm life more attractive for the boy. This is a work that the farmers' institutes should take up and discuss, as it is now worth more to agriculture than any other single interest.

BREEDING TO A DEFINITE PURPOSE.

Has it ever occured to you why all the progressive people of the world draw on the Netherlands, Guernsey, Jersey and Ayrshire for cows? Why breeders from various parts of the world go to France and Belgium for draft horses, to England for draft and running horses, beef cattle and mutton sheep, and to Scotland for her beef cattle? Did it ever occur to you that wherever any locality becomes noted for the production of any kind of live-stock, all the people in that locality are making a speciality of breeding in some definite line and for a definite purpose?

Does it not follow that if we can hope to make a reputation and become distinguished for breeding something of great merit and to daw the patronage of enlightened and progressive people, we, too, must specialize, have some definite aim in view and combine all the intelligence and energies of all in a community, county or province to the one purpose? If so, why do some Canadian farmers, as a rule, indulge in hodge-podge breeding and when one starts to breeding a certain kind of stock his neighbor goes straightway and gets something else?

England furnishes a most wonderful example of this idea of localizing the breeding of animals in special sections. When we come to think of it, nearly all of our breeds of horses, cattle, sheep and swine have been originated and developed in Great Britain. What is more, they localize their interests. Certain secetions are given over to the breeding of Shorthorns, others of Herefords, Devons, Polled Angus, Galloways, Jerseys, Guernseys, Ayrshires, etc. Then there are certain districts devoted to special breeds of sheep, or swine or horses. As a consequence, buyers do not waste time or money in running all over the kingdom to find out what they want.

LOOKING AHEAD.

Just now it is well to remember that, barring the unforeseen, what the crop of 1910 will be and what profits will acrue to the farmer, depends in no small degree on the thought that the individual problem at this season of the year.

Haphazard farming will pay no more than haphazard work in other directions. Consider carefully the results of the year, which has just closed. Look for the loopholes through which profits slipped away. Learn from the experience of the past.

Study the agricultural reports and read the farm papers. Get in touch with the markets, and don't help to swell the total of overproduction in this department or that. Reduce your acreage of this and increase the planting of that, if the opportunity seems favorable. Study new opportunities, and without being reckless see to it that the other man does not skim all the cream from the milk while you are wondering "if it would pay."

Above all, when the rush of spring commences be ready with a definite plan, and follow it. System, perhaps, counts for more on the farm than anywhere else.

FUN IS A NECESSITY.

Most people have the impression that fun and humor are life incidentals, not necessities; that they are luxuries and have no great bearing upon one's career.

Many think of fun as frivolous, indicating a lack of serious purpose in life. There are parents who rebuke their children because they want to have fun and go in for a good time. These parents have yet to learn the great part which fun and humor play in the physical economy, and their influence on the life.

Canadian Guernsey Breeders' in Annual Session.

The annual meeting of the Canadian Guernsey Breeders' Association was called to order in the Winter Fair Building, Amherst, N. S., at 2 p. m., December 8th. President D. G. McKay occupied the chair. Secretary H. W. Corning not being present owing to being laid up with a broken leg, Wm. McConnell was appointed Sec'y. pro. tem.

Minutes of the last annual meeting were read and adopted.

The reports of officers were called for and responded to as follows: Pres. McKay gave a written address as follows:

"Gentlemen:—As we meet in annual session of the Canadian Guernsey Breeders' Association, I am glad to state that the present year has been a profitable one for Guernsey Breeders.

"I believe Guernseys have shown up at our fall fairs better than ever they have before.

"To make a success of our breed, there are three important things that we should attend to, viz: breed, feed and weed. It is very important that we have good stock to start with, it is also important that we feed well, but I think perhaps we make more mistakes in the latter by not culling out our misfits. Let us ever remember that we do ourselves and our breed a serious injury by selling a poor animal for breeding purposes.

Vice Pres. E. J. Johnson said that he was becoming more and more interested in the Association and although he had not responded to the Secretary's request and written a paper on the "Grade Guernsey as a profitable dairy cow for Cape Breton" yet he was prepared to advise the dairymen of Cape Breton to breed Guernseys, because he believed them to be the best all round breed. He urged the breeders to use only the best types for breeding purposes and to slaughter the misfits, rather than use them and thus hinder the development of the highest possible standard of the Guernsey dairy cow.

Secretary, H. W. Corning sent the following report which was read and adopted.

"Officers and members of the Canadian Guernsey Breeders' Association:

"As we meet in the beautiful town of Amherst for this, our fifth annual meeting, your Secretary is very glad to report progress for the year 1909.

"Our membership has nearly doubled and I am sure our golden colored Guernseys are more than twice as popular as they were a year ago. This, however, is but a natural consequence, for as the dairymen are coming to realize that the Guernseys most economically produce milk and butter of the best flavor and highest natural color, they are turning their attention toward them.

"Several new herds of pure bred Guereseys are being started and agricultural societies as well as private individuals are seeking after Guernsey bulls for grading herds of profitable dairy cows. A superintendant of agricultural societies said, "Guernsey bulls are scarce and the demahd for them is steadily increasing."

"We have now two hundred and thirteen Guernseys recorded at Ottawa and while this is a small number compared with the thirty-nine thousand registered in American Guernsey cattle club records, yet when we remember that we have only been recording cattle for about four years and that a large percentage of the cattle recorded are just entering thirty days of usefulness, we can easily see that our growth is a certainty.

"According to the reports of the agricultural papers, the quality of the Guernseys shown at the leading exhibitions in Canada this fall was a credit to the breed and while it is necessary that we present our cattle to the public at the shows in their best condition, there is another very important thing that we, as breeders must not lose sight of and that is, what should be the first line of our motto as breeders of dairy cattle, viz: the economical production of milk, cream and butter.

"That a decided advance has been made in this direction is shown by the fact that cows from two herds are now being tested in the record of performance. Let the good work continue!

"The Experimental Farm, Ottawa, has entered three cows and in a letter of recent date, Professor Grisdale stated that he would forward to two or three more entries in a short time. Your Secretary has entered four cows and intends to enter others of his herd as soon as they freshen.

"The Department of Agriculture has provided an easy and cheap way for us to secure official records and the sooner the breeders take the opportunity offered, the sooner we shall know which are our best cows and which strain of blood to seek after to help us in our work of breeding for the most profitable producers.

"There are forms of applications to the record of performance on the table here, and I hope that a large number of our breeders will enter their herds at an early date.

"We may rest assured that while the business like appearance of the Guernsey and the natural high color of her product have attracted the attention of a large number of our dairymen who are catering to a fancy trade, the large official records which she can so easily make will attract the attention of a great many more.

"Your Secretary is very much disappointed because he is unable to attend the annual meeting on account of having a broken leg. He was planning to travel by the aid of crutches but the doctors advised him not to take the risk because a jar might cause him serious trouble, so he has had to resign himself to his fate and stay at home.

"At the request of the executive committee Mr. Wm. McConnell has very kindly consented to act in my place and so I trust that our fifth annual meeting will be a pleasant and a profitable one."

Respectfully submitted,
HOWARD W. CORNING.

The Treasurers report, which was audited by Messers E. J. Johnson and J. F. Roach, a committee appointed for that purpose, showed a cash balance of $91.66.

Mr. Elderkin spoke endorsing the many sentiments embodied in the officers' reports and advised unanimity of propuse among the members. He was much interested in its welfare and pleased with the progress the Association had already made. He was highly pleased with the exhibit of Guernsey cattle at Halifax this year and urged the members to make as good or a better show at the Dominion exhibition in St. John next year.

Mr. John McDonald stated that Guernseys were certainly becoming more and more popular in the section of country where he resided.

The election of officers resulted as follows: President, D. G. MacKay, Heath Bell, N. S. Vice President, E. J. Johnson, George's River, C. B. Secretary, H. W. Corning, Chegoggin, N. S. Directors, John McDonald, Shubenacadie, N. S.; Wm. R. McCready, Jacksonville, N. B.; T. D. Blakie, Great Village, N. S.; Thos. A. Peters, Fredericton, N. B; J. J. Garean, St. Rock Cachigan, Que. Auditor, Robert Robinson, Nappan, N. S.

Moved by Mr. E. B. Elderkin, seconded by Mr. E. J. Johnson and ordered that a letter of appreciation for service and sympathy, re accidental breaking of his leg be written and forwarded to Secretary Corning.

WM. H. MCCONNELL,
Sec'y. Pro tem.

For More Favorable Tarriff Rates.

EDITOR MARITIME FARMER.

Allow me to draw the attention of your readers to a few inequalities in the Canadian customs tariff from the standpoint of one intersted in horticulture.

The idea of bonusing dairy cows is probably a commendable one, but the problem of making a good cow produce more than 3000 lbs. of milk in a year or discovering whether some other cow belongs to the order of "The Sons and Daughters of Rest" or not, is, to all appearance, one easily solved when compared with some which the horticultural farmer is called upon to tackle.

In the present tariff schedule there are 15 articles enumerated as free, not including books for the blind, which can be said to be of exclusive benefit to the farming community.

Of these 15 articles 2, animals for improvement of stock, and cream separators, are of distinct and unquestionable benefit to dairy farmers, there being nothing to correspondingly benefit the horticulturist.

It is only right that these things should be upon the free list, but would it be anymore than right that spray pumps and fixtures and motive power for same should be also placed there, giving us a chance to get the best products of the world, in this necessary machinery, on something like a fair footing.

The value of cream separators and steel bowls, and parts used imported into Canada for the year ending March 31st, 1909 was $760,162.

There is no separate enumeration of spray pumps in the classification, but since these implements have a much more circumscribed field of usefulness, their value must be much less.

I do not claim that the dairyman has an unfair advantage, but simply quote such figures as I could obtain to show that over $700,000 worth of machinery could be imported free to benefit one class, something probably of less than one-half the value could be placed on the free list in aid of another.

FRANK A. BOLSER,
Annapolis County, N. S.

Serious Disease of Potatoes in Newfoundland.

In Bulletin No. 63 issued during the last month from the new Division of Botany at the Central Experimental Farm, the Dominion Botanist (Mr. H. T. Gussow) describes a serious potato disease lately discovered by him in Newfoundland. This disease which is identical with that known in Great Britain as black scab, warty disease, cauliflower disease of potatoes and more properly, potato canker, was first discovered in Hungary in 1896 by Professor Schilberszky, who gave to the fungus causing it the scientific name of Chrysophlyctis endobiotica. In 1901 the disease appeared in Great Britain, where it spread from country to country until in 1908 244 cases were reported under the Destrucsive Insects and Pests Order. By this Order, which was made in 1908, persons concealing outbreaks are rendered liable to prosecution and a heavy penalty.

In appearance the disease is characterized by nodular excrescences which may be larger than the original tuber itself. The growth consists of a mass of coral-like or more or less scaly excrescences or nodules. These are of a somewhat lighter color at the base and are dotted with minute rusty brown spots over the surface. In an advanced stage the tubers are wholly covered by this growth, having lost every resemblance to potatoes. They are lumps of irregular outline, never spherical or oblong, but simply a mass of ragged and edged excrescences. In a still more advanced stage the tuber is reduced to a brownish, black soft mass giving off a very unpleasant putrefactive odour. "This," to quote textually from the bulletin, "is the most dangerous stage of the disease; tubers which have reached it cannot be harvested whole, they break in pieces and thus the brownish pulpy mess consisting almost entirely of the spores of the fungus and remains of the cell walls of the potato is broken up, the spores are liberated in millions and the land is badly infested for years."

The seriousness of the malady may be also gathered from the statement that no sound tuber is saved from a crop that is attacked. The disease is not influenced in any known degree by physical or mechanical conditions, and may therefore be considered as the most serious pest attacking potatoes. Fields at harvest time in affected areas present the most hopeless appearance, and the disease has caused the greatest havoc in all localities where it has appeared.

In the bulletin, which is illustrated by drawings from nature and microphotographs of diseased tubers, Mr. Gussow describes fully the nature of the disease, the method of dealing with outbreaks and the precautionary measure to prevent its introduction. Potato growers are especially warned to guard against the disease (which though it has appeared in Newfoundland is fortunately so far unknown in Canada) by selecting only sound potatoes for cultivation and by strictly rejecting any that appear diseased.

It is understood that as a result of a recent personal investigation by the Dominion Botanist in Newfoundland the disease appears to have been introduced into that country by means of diseased seed tubers imported from Scotland. Potato growers in Canada should therefore be exceedingly cautions in the use of seed tubers that may have been imported from Great Britain or the continent of Europe.

The Profitable Use of Artificial Manure.

Every crop removes a greater or less amount of fertilizing matter from the soil. Milk and beef also deplete the soil, and should these be sold off the farm its fertility ultimately sinks, unless it is replaced by some sort of natural or artificial manure. A plant requires about ten separate constituents, all essential, before it can grow; but by far the greatest part of all plants is built up of consolidated water and carbonic acid gas drawn from the atmosphere—sources which are practically inexhaustible. The soil is responsible only for a small portion, but, as the strength of a chain depends upon its weakest link, so also the ingredient obtained by the plant with the greatest difficulty regulates the crop. Of all the elements in ordinary cultivated soils only four are likely to run short—i. e., nitrogen, phosphates, potash and lime, and it is these we aim at supplying in the several manures. Abundance of any one ingredient in a soil will not make up for the deficiency of another. Some soil may only require one fertilizing substance to be added before it can produce a full crop. Poor soils would naturally require a complete manure, which supplies all that is likely to be wanted, but it must be remembered that every manure is not complete. Some supply only one or may be two of these fertilising elements, and in consequence we have nitrogenous, phosphatic, and potassic manures. The most important point to a farmer is to know which particular class gives him the best results, or how to blend them for the same end. A knowledge of each group and simple trials on the farm, leaving unmanured parts for comparison, will often be the means of forming a paying investment to the farmer. Vendors of manures are bound to supply the purchaser with a guarantee stipulating the percentage of nitrogen, phosphates (soluble or insoluble), and potash they contain, as the case may be. The condition of a manure, as well as the kind and quality of the plant food it contains has also to be taken into account when putting a value on it. Good cultivation is essential if the full effect of manure is desired. Not only does it help to make the dormant plant food in the soil soluble, but also gives more vigorous and robust plants. As to lime in the general average of soils this is found in sufficient quantities. It has a many-sided action. Not only is it a plant food, but it has also a physical effect, helping to open heavy soils, it binds together loose soils, helps to liberate other plant foods, combines with the acid in a sour soil and sweetens it, besides being one of the best curative agents to employ in combating club root in turnips. A usual dressing would be about two tons per acre. To much lime in a soil is about as bad as too little; it has a tendency to sink downwards. R. S. FORBES.

HORTICULTURE

Co-operative Fruit Growers at Waterville, N. S.

On Saturday, January 15th, a special meeting of the members of the Waterville Co-operative Fruit Company Limited met with Mr. G. E. Best in the chair.

Mr. Foster M. Chute, the manager of the company, read the minutes and gave a summary of prices received for apples during the past season which were more favorable than prices received from local buyers, or from agents representing English firms.

Although the company was only inaugurated last fall, it was consequently at a disadvantage because it was not widely known, but the results so far are very satisfactory. The fruit growers of the district already find truth in the old maxim that "unity is strength."

Mr. Chute is not only an experienced orchardist and small fruit grower, but has had some experience in orange-growing and the advantage of travel. He has visited Edgland and other points in the interest of the fruit industry, so that his knowledge of business and markets has served him well in drumming up trade with apple firms. The members of the fruit company seem satisfied that he is the right man in the right place. It was a wise fore-thought of Mr. Chutes' which prompted him to dispose of the early apples in local markets and those of Boston which realized good prices. At that time there was a glut of Gravenstiens in England, and those shippers who were unfortunate enough to export to London recived 17c, or in some instances, 50c per barral while others were in debt. Another advantage was, that the firm in London to whom the company ship, is able to draft fruit in time of flatness to the big provincial towns.

With regard to the community, it was pointed out that the company keeps the people at home by giving them employment, and they benefit the neighborhood by spending their earnings in the place.

As an object lesson in thinning and spraying fruit, three barrels of Baldwins were selected at random from the lots of three different mew. The apples in the barrels were just as they came off the trees, unsorted.

In the first barrel were apples which had been thinned and sprayed. This fruit was of a very brilliant color, clean, and it was calculated that such fine fruit would pack ninety barrels of number ones out of every hundred.

In contrast to the first barrel which was nearly full, there was a barrel of fruit which apparently had shrunk to three quarters of a barrel. This lot had not been sprayed nor thinned. Nearly every apple was badly spotted, and the majority seemed to be culls. Probably there would not be more than a peck of sound fruit in the barrel, yet the grower would wonder why his fruit packed so few barrels of number ones, and would blame the manager for the excess of culls.

The third barrel contained fruit which had been sprayed, but not thinned. It plainly showed the advantage of thinning. All three barrels spoke the praises of spraying and thinning more loudly than a long discourse on the subject.

The cost of packing a barrel of apples is fifteen cents, that of a box seven cents. It takes a much longer time to sort poor fruit. Growing box fruit is desirable, but if we are to compete with the West, we must thin. The best time to do this work is after hay making, or the beginning of August.

By neglecting orchards in spring, it was claimed that the grain and potatoes grown cost all they were worth, if the spraying of the orchards was neglected. We should have more faith in our orchards in the spring. It is good to put in other crops, but we should not put in so much, or so many that they will keep us chaseing after them all summer at the expense of the orchards.

Turning to the subject of manures, one grower estimated that, with a green cover crop, it cost him nine dollars per acre for commercial fertilizer in the form of slag. Other share holders recommended acid phosphate and potash. Another grower said that he used to use much barnyard manure but since he had used slag his apples had been a much brighter color.

It was proposed that the fruit farmers should co-operate and buy fertilizers through the company. If the fertilizer is bought in July, it can be had for one dollar per ton cheaper than if delivered in November, and if bought in quantities there would be a saving of from one to four dollars per ton.

As the warehouse occupied is rented, it was decided that if this kind of business was to be done, they must have a place in which to do it. In order to decide about building a 150 feet warehouse, which was estimated would cost about six thousand dollars, it was decided to call another meeting a fortnight hence. It was also decided that in future the company handle potatoes, with which the manager did well last season.

The advantages of spraying with a sulphur lime wash was then discussed. It was stated that it would not russet the fruit as vitriol will at times. One member said that he now used three pounds of blue vitriol instead of four, and he found that it did just as good work and was not so liable to russet as four pounds.

Several co-operative companies have been formed in the Valley for the disposal of fruit. The business meetings being men together, who naturally discuss the best methods. Different companies will stimulate competition and the man who stands by himself will soon find that he cannot afford to do so. It is to be hoped that the companies will raise the standard of packing. Some people, because of their meaness seem incapable of putting up good fruit. In trying to save, they loose, and the loss is not only theirs, for they give a bad impression in the old country of people who really do put up honest packages.

EUNICE WATTS.

Mr. A. G. Turney,
The newly appointed horticulturist for the province of New Brunswick.

New Brunswick Horticultural Interests will be Looked After.

Mr. A. G. Turney, at present employed by the Ontario Department of Agriculture at Simcoe, Ontario, has been appointed Horticulturist to the Province of New Brunswick. Mr. Turney is a young man of twenty-five years of age, who since coming to Canada has distinguished himself along horticultural lines. Graduated from the Ontario Agricultural College after a four years course in which he specialized in horticulture with distinction, since then he has been employed during the summer months at special horticultural work for the Agricultural Department, and during the winter has been teaching horticulture in some of the high schools. He comes to New Brunswick with the very highest references from the President of the agricultural college, the professor of horticultural there and the officials of the Department of Agriculture with whom he has worked. He will leave Simcoe this month, and after taking the special short course in horticulture at Guelph, from 25th January to 5th February, will proceed immediately to New Brunswick to take up his duties. Some of the work upon which he will be engaged may be outlined as follows:

The supervision of illustration orchards and the planting of additional ones where the public interest demands.

The holding of orchard meetings at the illustration orchards throughout the spring and early summer to give practical demonstration of the best orchard practices

The introduction and testing of new and promising varieties of fruit of all kinds at various points throughout the province.

The teaching of short winter courses in fruit growing at various centres.

The encouragement of the starting of nurseries for the proprgation of the best varieties of apples, pears, etc.

The encouragement of co-operative associations among fruit growers for spraying, packing and shipping purposes.

Instruction in the packing and marketing of fruit and the placing of experimental shipments in possible foreign markets.

To give instruction and assistance in fighting insect pests and diseases upon all classes of crops.

To give instruction and assistance in the eradication and prevention of weeds.

To co-operate with the Dominion Seed Branch in encouraging the growing and sowing of the beft and cleanest seeds of all kinds.

Evidence is accumulating that Eastern Canada can produce a better quality of root and vegetable seeds than are now produced in Europe, and it is very desirable that the growing of seed of this character should be initiated and encouraged and this would also provide a wide field of effort for a horticulturist.

He should also be able to arrange for the display of New Brunswick grown fruit and vegetables whence immigration is desired or where markets are possible.

Brown Tail Moth on Imported Nursery Stock.

To Nurserymen and Others:—We are again confronted with the possible introdnction of the brown-tail moth into the Dominion in the shape of the winter nests on nursery stock imported from abroad, especially from certain regions in France where nursery stock has sometimes been found growing in fields bounded by hedges infested with the brown-tail moth.

Last year nurserymen and other importers co-operated with this division in the work of preventing the introduction of this insect by notifying us of the arrival and expected arrival of consignments of nursery stock from abroad. This enabled the division to inspect the

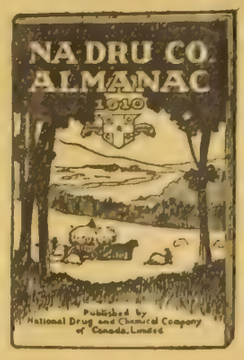
(Continued on page 000)

Good Fruit Packing is Sure to Pay.

The outlook for home grown apples is very poor in England this year, and on that account it behooves Canadians to see that the bulk of extra demand is thrown toward this country.

Our great competitor, the United

NA-DRU-CO ALMANAC



-FREE-

Full details of our word contest
$200. in cash prizes
Three pages of sprays for fruits and vegetables
Tables of Measures
How to preserve eggs
A mine of information

"Na-Dru-Co" Almanac for 1910 is the handsomest and most useful book of its kind ever distributed to the Canadian farmer and his wife.

It is a miniature encyclopedia, containing useful hints for every member of the family.

Calculations are made for your district.

In order to familiarize everyone with the name "Na-Dru-Co", we have inaugurated a novel word contest in which we will present cash prizes amounting to $200, to the winners. Full particulars in the Almanac.

Na-Dru-Co Almanacs for 1910 are now being distributed by Druggists throughout the country. If your druggist should not have a supply, write direct to the National Drug & Chemical Co., on the coupon attached and a free copy will be sent you by return mail.

THIS AD WILL NOT APPEAR AGAIN.
SEND COUPON TODAY.

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The Piano Which Everyone Can Play

An ordinary piano is limited in its usefulness. If no one in the family plays, it stands idle. This Piano is never idle—every one in the family plays it.

New Scale Williams Player Piano

unlocks the hidden treasures of the world's music. Everyone can play it—and enjoy his or her favorite music, be it what it may.

New Scale Williams Player Piano is a double delight—it gives you the superb New Scale Williams Piano, and the ability to play it.

Made with 88 and 65 notes—in a variety of magnificent designs. Our catalogues show the New Scale Williams Player Pianos in detail. Write for free copies and particulars of our plan of easy payments.

THE WILLIAMS PIANO CO. Limited,

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FERRY'S SEEDS

To grow the finest flowers and most luscious vegetables, plant the best seeds. Ferry's Seeds are best because they never fall in yield or quality. The best gardeners and farmers everywhere know Ferry's seeds to be the highest standard of quality yet attained. For sale everywhere.

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You Can't Cut Out

A BOG SPAVIN, PUFF or THOROUGHPIN, but

ABSORBINE

will clean them off permanently, and you work the horse same time. **Does not blister** or remove the hair. Will tell you more if you write. $2.00 per bottle at d'lers or deliv'd. **Book 4 Free.**

ABSORBINE, JR., for mankind. $1 bottle. Reduces Varicose Veins, Varicocele, Hydrocele, Ruptured Muscles or Ligaments, Enlarged Glands. Allays pain quickly.

W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

States, is less advantageously placed, in that apples hold first place in England very largely on account of weight. Latest statistics show that our apples weigh, on an average, ten pounds per barrel more than theirs, thus enabling Canadians to maintain their lead, provided, of course, equal care is used in packing and shipment. There is certainly no good reason why we should lose in this respect, yet of late there have been more objections than usual in the packing of apples received from this country. One authority says that continued dishonest and careless packing will eventually lead to distrust to all grades of our apples, thus enabling our neighbor, the United Stated, to increase her hold on this market.

Commission men should insist on honest and careful packing and farmers should voluntarily do their part toward seeing that our reputation for the best apples is upheld.

Owing to a difference in season, Australia and Tasmania are not rivals to be feared, as their crop is usually all disposed of in the spring and summer. It is therefore plain whom we have to fear, and with a little systematic work done by producers and commission men working together, Canadian apples will still remain first choice in the English market—Canadian Grocer.

A National Apple Show.

The second so called National apple show of Spokane, Washington, was held on November 15th and following days. This is said to be, and no doubt was, the largest exhibition of show apples ever got together. The prize list totalling $30,000 called for big things in apples. From the reports at hand we find our friends claiming that the exhibit, if counted, would exceed 1,500,000 apples. As there were thirteen carloads in competition for special prizes in the carload class, this would seem a reasonable exhibit. The first prize carload netted the grower about $4,400.00, as the exhibit won $250 in its own class and $1,000.00 sweepstakes, while the lot sold for $5.00 per box with 630 boxes in the lot. The variety was Esopus Spitzenburg grown in a five acre orchard of 16 year old trees. There was 98 tin boxes and 136 five box lots, with 278 single box entries, and 1328 plates. A prize for largest apple brought out eleven specimens ; the first prize going to Wolfe River, 16 1-2 inches in circumference, weighing 25 ounces. An apple called the Spokane Beauty was exhibited in this class, 17 1-3 inches and weighing 41 ounces was disqualified by two small cuts caused in packing. The show was a pronounced success, the attendance exceeding 100,000 people.

Visit of Canadian Fruitgrowers.

EDITOR MARITIME FARMER.

The following is an exaract from a letter just received from the Secretary of the National Fruit Growers' Federation :—

"I am instructed by the Council of the Federation to offer to Canadian fruitgrowers a most cordial invitation to visit some of the chief fruit plantations of England. If this visit is arranged, and my Council sincerely hope it will be, they will feel greatly honored at this opportunity of welcoming Canadian fruitgrowers."

This follows a suggestion made in one of my reports to the Department of Trade & Commerce, published in the Weekly Report of August 30th., to the effect that Canadian fruitgrowers ought to imitate the example of those on the Continent and visit the ports and markets in this country. A prominent member of the Federation brought the matter to the notice of the Persident, who himself proposed to his Council that an official invitation be sent, so that if such a party is organized, they should visit not only the market, but one at least of the chief fruit growing districts.

The advantages of such an excursion are obvious, so that I feel confident the project will have your warmest support.

W. A. MACKINNON,
Canadian Trade Commissioner.

EWING'S Seeds Pay

Even if someone offered them free it wouldn't pay you to sow seeds of poor or doubtful quality.

Your crop should be worth 10 to 100 times the cost of the seed. Inferior seed will easily lose you half the crop, or from 5 to 50 times the cost of reliable seed.

Economizing on seeds is most expensive economy.

If you sow Ewing's seeds and the weather is anyway reasonable, and you give them a fair chance in the way of soil and tillage, you can depend on FULL CROPS of A1 quality — crops that will pay handsomely for the land used and the work done as well as for the small investment in the seeds themselves.

Ewing's Seeds have proved their reliability by forty years of bumper crops.

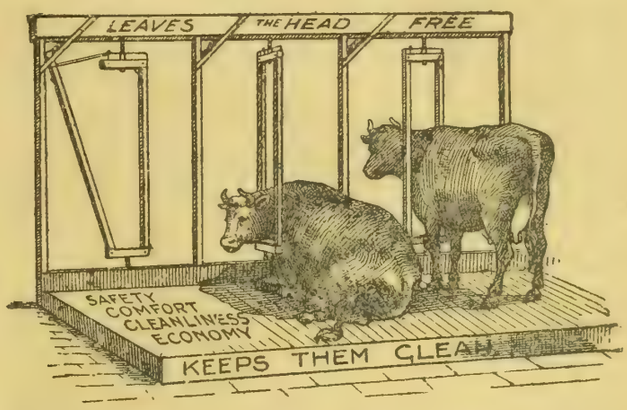
Insist on Ewing's. If your dealer hasn't them buy direct from us.

Our big Illustrated Catalogue is Free—write for it to-day.

Wm. Ewing & Co., Seedsmen, McGill St., Montreal.

4

The Maritime Stanchion Patented 1906.



Has Automatic Lock which is simple and sure. Swings freely so as to give animals the utmost comfort. Holds animal absolutely secure and ensures greatest cleanliness. The simplest, safest and strongest tie on the market. Send for illustrated folder.

Bailey-Underwood Co., Ltd., New Glasgow, N. S.

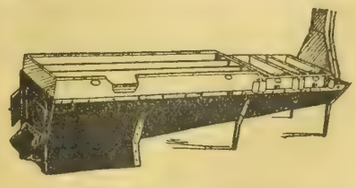
FENCE FOR SALE | **4,000 Rods 4-bar 40-inch No. 9**

Fence stays 22 inches apart. In lots to suit in 40 rod rolls. **Price 23c per rod.** Freight paid east of Fort William. This fence was made up for a foreign customer, who failed just before shipment was made.

Also, some bargains in small lots of 7-Bar, 8-Bar and 10-Bar Fences. Particulars on request.

THE EMPIRE FENCE EXPORT CO., LTD., Walkerville, Ont.
Good Dealers desired in unoccupied Canadian Territory.

"Champion" Evaporators Make and Save Money on Your Sap Boiling



Make more money by producing a clear amber colored syrup, this means more money for you. Your syrup will bring fancy prices.

You will save mon,y on the boiling because you get the finished syrup in one quick, shallow boiling.

You save fuel, and much time too.

We will gladly send you catalogue and write explaining the great advantages to you of a "Champion" Evaporator.

Write for catalogue today, and get your machine in before first sap runs.

The Grimm Mfg. Co., 58 Wellington Street. MONTREAL.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Figuring the Cost of Milk.

During the years 1906 to 1905 the station has 74 complete yearly records of 29 dairy cows, mostly grade Jerseys. The average yearly production was 6890 pounds of milk, testing 14.1% solids and 4.93% fat. The average food cost of keeping each cow was $70. Since that time the data, while all recorded, have not been tabulated. It is safe to assume, however, that the food would cost 20% more at the present time. The station herd is still fed during most of the year. The cows are, however, turned to pasture during the months of July, August and September if dry. Using the above data as a basis the following calculation may be made :

Food cost of cow for one year	$ 84.00
Care of cow and milk	30.00
Depreciation of cow	7.00
Depreciation of horses, tools and dairy apparatus, etc.	8.00
Taxes, insurance and repairs	5.00
Medicine, salt, bull service and sundries	3.00
Making total expense for year	$137.00
Less five cords manure	$20.00
Less calf	2.00— $22.00
Total	$115.00
2900 quarts of 4.9% milk cost	$115.00

Cost of one quart 4 cents.

In the above calculations the farmer would sell his roughage to the cows at market rates, and if he took care of his herd or part of it, personally, he would save the labor outlay. It is believed, however, that 4 1-2 cents would represent the lowest price at which he could sell his milk produce under reasonable sanitary conditions and secure only a very moderate return on his investment.

Naturally, the cost of producing high-grade or certified milk, from tuberculin-tested cows, would be considerably in advance of these figures. It would be possible to produce milk testing 3 to 4% fat for a little less money than the above.

The food cost of keeping an average size cow yielding the same quantity of 5% milk daily may be estimated as follows :

DAILY FOOD COST.

7 pounds of grain	$0.10 1-2
30 pounds silage	.07 1-2
12 pounds hay	.12
Total daily cost	$0.30
30 cents daily for 224 days	$67.20
20 weeks pasture at 50 cents	10.00
4 pounds grain daily for 20 weeks	8.40
Making total of	$85.60

It will be seen that the food cost by this method very closely approaches the figure given in the previous calculation.

Voohees of the New Jersey station presents the following method of calculation for 40-cow dairy owned by a practical, intelligent farmer, producing reasonably clean milk, and who must get his living from the farm.

DAIRY INVESTMENT.

Farm, 100 acres including buildings	$ 7,500.00
Improvements in dairy barn	1,000.00
Dairy houses	1,000.00
Dairy apparatus	500.00
Tools and implements	1,500.00
Horses (three teams)	1,500.00
Cows, 40 at $75	3,000.00
One bull	100.00
Total	$16,100.00

ANNUAL RUNNING EXPENSES.

Labor, three men at $500 in barns	$1,500.00
Labor, one man and boy in dairy	750.00
Labor, two men with teams	1,000.00
Depreciation in cows, 10%	310.00
Depreciation in horses	150.00
Depreciation in value of tools, implements and apparatus	200.00
Taxes, insurance and depreciation in buildings	150.00
One-half cost of feed	1,720.00
Total	$5,780.00
Interest on capital at 5%	$805.00
Total expense including interest	$6,585.00

The above total expense represents the cost of producing 300,000 pounds of milk (7500 pounds per cow), or $2.20 per 100 and 4.83 cents a quart.

These different methods of estimation in the hope that it will stimulate thought on the part of milk producers. I will be glad to have the figures criticised and to learn the experience of those actually engaged in the production of market milk. It is believed that in the past, milk has been sold at altogeth too low a figure to enable the producer to secure a fair return on his investment.

J. B. LINDSEY,
Mass Exp. Sta.

Regular Milking.

EDITOR MARITIME FARMER.

Among the missionary work to be done by the butter makers now is that of impressing on the patrons the importance of regular milking and regular feeding of the cows. There is a great temptation to the average milk producer, not a special purpose dairyman, to put aside this important work for the apparently more pressing spring work.

We say apparently because the farmer who neglects the regular milking and feeding of his cow in order to get a little more plowing or other field work done, is like the man who cannot see the dollar because he holds the cent too close to his eyes.

Irregular feeding and milking will most assuredly lessen the milk production more or less and so will the neglect of properly stripping the cows—only more so. And anyone who has ever handled milk cows knows how easy it is for them to fall off in their yield and how hard it is to regain it.

But there is another argument in favor of regular milking and that is the fact that nothing will make the hired men or the boys more disgusted with farm life than this working overtime in the field and then coming home tired to milk the cows, and even if this disgust does not develop into a prompt leaving of the farm, it operates on the minds of the milkers so as to make them indifferent and leave the last and richest few streams unmilked. The result is a shrinkage in the yield and an accelerated drying up of the cows ; and the farmer finds at the end of the year that "dairying doesn't pay"—a cry we have heard from too many farmers during the past twenty years or more, and one which hardly agrees with the facts reported from bankers as to the mortgage lifting power of the gentle cow.—Dairyman, P. E. I.

Why Dairy Farming is Profitable.

An Australian dairy professor summarizes the advantages of dairying in the following reasons :

It takes less fertility out of the soil than any other form of agriculture, and hence it is useful in following a well regulated system of rotation.

It can be combined readily with other forms of agriculture or horticulture.

The dairy provides, in winter, a quantity of stable manure in which the straw from the farm is profitably utilized.

The by-products from the cow, skimmilk, whey and buttermilk, are a source of income in raising pigs and calves.

Dairying gives constant and regular employment, of a light character, to every member of a farmer's family.

Dairying inculcates habits of punctuality, industry, cleanliness and thrift on the farm.

Cheese and butter are condensed products, and the cost of carriage, in comparison with their value, is less than that of any other farm product.

The demand for good butter and cheese, on the world's market, is unlimited, and, so long as the quality is maintained, an all-round, even and profitable price can always be secured.

The monthly check from the factory provides the mainstay in the household as against the precarious returns from yearly crops.

In mixed farming the income from the dairy is the most reliable.

The farmer's household, as a result of dairy work, is always supplied with fresh milk and cream, butter, cheese, pork, bacon and veal.

Storekeepers, traders, bankers, financial men and politicians all fully realize, after years of experience, that wherever dairy farming is conducted, farmers are most prosperous, mortgages are rarely found, and the value of landed property considerably enhanced.

The creamery does not alone benefit the farmer. It is a source of great satisfaction and benefit to the merchant also, because where the farmer gets cash for his dairy products, he is able to pay the merchant cash.

It is said that at this time 20,000 dairy cows are now being milked by the milking machines.

The centrifugal hand separator is a necessity on every farm, whether cream is sold to the creamery or whether butter is made for local trade. With a farmer, milking six or eight cows, a condition can not be conceived by which the farmer should not have the best centrifugal machine he can buy.

Two or three shotgun cans should be had with the equipment of each hand separator. They are more handy than the regular milk cans, although the latter should be used in delivery of cream to the station. The shotgun cans are handy for use in cooling the cream before it is added to the supply can. They are light and easily washed.

Cleaning the Separator.

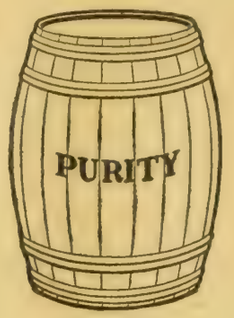
In visiting patrons of creameries, I have found that there is a great tendency to not wash the separator. Some wash it once a day, some not that often. They claim that they cannot see any difference in the butter made from the cream when the separator is cared for in this manner. Let them keep that butter for three months an

PURITY FLOUR

And Its Keeping Qualities

SOME people find it necessary to buy a considerable quantity of flour at one time—sufficient to last for a long period. Naturally they are anxious to procure a flour of the kind best adapted to lengthy storage.

There are two important reasons why PURITY FLOUR possesses these qualities. One is that it is made entirely from Manitoba Hard Wheat. The other lies in the fact that the careful milling necessary to produce "Purity" absolutely excludes all low-grade particles of the wheat berry. It's the high grade Manitoba Hard Wheat Flour that keeps—stands longest storage. That's "Purity."



"Purity" flour may cost a little more, but is more than worth the difference. Try it. Watch results both for quality and yield.

"More Bread and better Bread"

WESTERN CANADA FLOUR MILLS CO., LIMITED

Mills at Winnipeg, Goderich, Brandon.

CANCER

R. D. EVANS, Discoverer of the famous EVANS' CANCER CURE desires all who suffer with Cancer to write him. Two days treatment will cure external or internal Cancer. Write R. D. EVANS, BRANDON, Manitoba, Canada.

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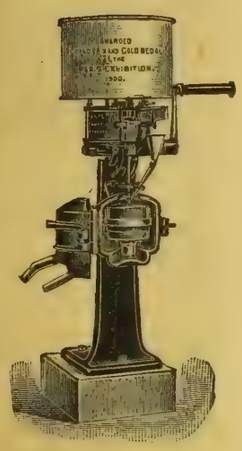
ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street, St. John, N. B.

Still Here Selling Melottes After Twenty Years.

Melotte Cream Separators Pay to Buy.



No other "Just as Good." To prove this statement, try it at home.

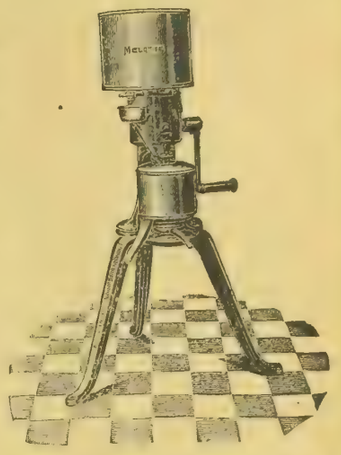
If your old machine is not satisfactory, we will make a fair allowance for it on a new "MELOTTE."

Testimonials from hundreds of users, some from your own district, sent FREE.

Write for particulars to Department "A."

The Best is always the Cheapest, although the first cost may be more.

GOOD LIVE AGENTS WANTED.



R. A. LISTER & CO. Limited, 62 Stewart Street, TORONTO.

Agents Wanted!

We want agents to handle the Acme Steel Ladder. It is by far the best seller on the market today. You can, with horse and rig, make $5 00 to $10 00 a day by simply calling on property owners in your vicinity.

The Acme Steel Ladder affords protection from fire in a greater degree than any other ladder.

The Acme Steel Ladder is made and sold in one foot lengths. These can be fastened in such a way as to make a ladder of any length perfectly rigid.

They can be moved anywhere on the roof, either from the top or bottom of it.

Send for information regarding our selling proposition.

The Acme Ladder is made in one foot links just the same as the old style ladder but with a very simple lock which is fully protected with patents. When the ladder is together the links are held rigid.

If you are thinking of equipping your buildings with steel ladders and there is no agent in your locality and will write us we will have a man call on you.

The Acme Steel Ladder Co.,
SUSSEX, - - N. B.

then they will see a great difference. Fifty per cent. of farmers' wives are neglecting to wash the separator. Those practices must be stopped, so far as possible. Many clean women, in other respects, leave their separator in a filthy state because the separator agent, that had a difficult machine to clean, said that it was not necessary to wash his machine. When one woman starts washing her separator only once a day, her neighbors soon do the same thing. As a result of these practices, we are not getting as good cream from separators to-day as we did 10 years ago.

All the filth and the slime in the milk is left in the separator bowl. You may flush it out as much as you like, but all the slime and dirt is left there. The next time the milk is separated many of the germs that are sure to be growing there, will be taken out with the cream. When the separator is not washed, the cream cannot help but be contaminated, unless, of course, the separator has been frozen in the interval. You cannot see these germs, but they are there just the same. Many of these germs grow most rapidly at a temperature of about 70 degrees, hence they find a favorable temperature in which to work when the unwashed separator is located in the stable.

All the tinware and the bowl of the separator should be taken to the house regularly each time it is used and thoroughly washed and scalded. The very best care should be taken to clean it well. One might just as well, and better, leave their milking utensils unwashed as to neglect the separator. Any woman should not be any more shocked at leaving her pails and other cream utensils unwashed than in leaving the separator in an unclean condition.—JAMES STONEHOUSE, Creamery Instructor, Kingston, Ont.

Milk Veins and the Udder.

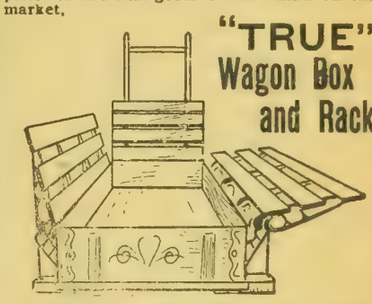
A few years ago, says Hoard's Dairyman, we thought we would see what percentage of farmers believed that the large veins on the belly of the cow which are called milk veins were really veins for conveying milk to the udder. So, without expressing any opinion of our own on the matter, we simply asked the following question of one farmer after another.

Why are these veins called milk veins? The answer from ninety-nine out of the hundred was in effect like this: "Because they carry the milk to the udder." Of the remaining ten, five could not give any answer except to say that they did not know, while only five had the right idea, viz., that these veins were in reality great blood veins returning blood from the udder to the heart. After we conversed with several of the original ninety on the subject and stated to them what science had really found out as to the purpose of these veins. In almost every instance, however, we found them adhering steadfastly to their own ideas. One of them declared that he had cut into a vein on a dead cow and had seen the milk flow out. If we believe the truth as it really exists, that these veins return the blood to the heart, it will teach us several valuable lessons:

1. It will show us the enormous circulation of blood that is required to produce milk in a good cow. 2. It will teach us that we must take good care of the udder, for with such a heavy influx and outpour of blood the organ is very sensitive to the abrupt changes of heat and cold. This is the reason that cows are very apt to have garget by lying on cold ground late in the fall; also by lying on stone or cement floors. 3. It will teach us the folly of tying cows in the common stanchion whereby it is easy for a standing cow to step over onto the teats or udder of the cow that is lying down next to her. We should wisely provide a system of tying cows in the stable that will prevent such serious injuries. 4. A knowledge of the true physiology of the udder will teach us the importance of careful and gentle usage of it in milking and the great importance of attending to any derangements at once which may occur.

Up-to-Date Specialties For Farmers And Gardeners.

Things you need—implements and tools that should be on every truck garden and farm. Our way of making these specialties assures adaptability, strength and service at the minimum price for the best goods of their kind on the market.



"TRUE" Wagon Box and Rack

Without wings and ladder, it is a perfect wagon box. With them, it is the best Hay, Stock, Wood, Poultry, Corn or Fruit Rack ever invented. Adjusted to any position in a m nute without wrench, hook or rope.

"Eureka" Churn

Barrel of finest stoneware—top of clear pressed glass. Churns by hand lever. The only sanitary churn made. 3 sizes—8, 10 and 12 gallons.

"Eureka Root Cutter

will slice or shred from 1 to 2 bushels per minute. Fastest machine made—easiest running. Tapering cylinder—10 best steel knives.

"Eureka" Combination Anvil

Best iron anvil, with vice, pipe vice and drill attachment, and saw clamps. Just what you need for repairing tools and machinery. Weighs 60 pounds.

The "Bacon" Seed Drill

will handle the most delicate seed without bruising or breaking, and will sow evenly to the last seed.

Write for Catalogue

Every farmer, who wants to make money out of his farm, ought to have our new catalogue. It shows our TOOLS, Rakes, Hoes and Machines as they are, and describes their construction in detail. Write for free copy.

The Eureka Planter Co., Ltd.
Woodstock, Ont.

LIVE STOCK.

A Healthy Herd From a Tuberculous Herd.

Bulletin No 277 of the Geneva, New York Experimental Station, gives the history of the development of a healthy from a tuberculous herd. For the benefit of farmers all over the United States a popular edition of this bulletin has recently been issued, giving the substance rather than the details.

In the fall of 1900 one of the cows at the station was found to be tuberculous, on physical examination. Post mortem examination confirmed this diagnosis. The result was the testing of the entire herd, consisting of very valuable animals, many of them registered and some of them recently purchased at a high price.

It was determined after careful consideration not to sacrifice the herd, but to retain the animals which showed no apparent signs of the disease and to handle the herd by the Bang method until the healthy animals reached the number in the original herd. The Bang method, so called from its originator, Dr. B. Bang, of Copenhagen, Denmark, has been successfully used in various countries and at the Wisconsin station. It is as follows :

1. Test all animals in the herd with tuberculin. 2. Separate the reacting or diseased animals from the healthy, keeping them from contact. 3 Disinfect the stables. 4. Test the healthy herd at invervals of six months, to detect any case of the disease which may have been in its incubating stage, at which time the tuberculin test fails to give results. 5. Remove all the calves from the tuberculous herd soon after birth, and put them on healthy cows or pasteurized milk.

This occurred in the fall of 1900. In March 1901 a division of the herd was made and the animals that had not reacted in the fall were put in a new addition to the cattle barn, without being again tested. In the meantime five additional cows and a calf not previously tested developed the disease through contact with the diseased animals, as was shown by their reacting when tested in October, 1901, eleven months after the first test. These cows and the calf were in the stable, but were immediately removed and placed in the tuberculous herd, leaving seven cows and six calves that were sound out of the thirty animals.

A series of accidents followed. The station barns were destroyed by fire, burning three calves and one heifer from the sound herd. In the confusion the the herds became mixed. Contagious abortion next followed, with the result that but one heifer was raised in the herd the next year. For several years many of the old cows lost their calves, practically every heifer aborted at once and one of them twice. Notwithstanding these misfortunes, it was found on testing the herd in November, 1905, four years from the beginning of the experiment, that it contained to the number of the original herd.

The report says : "This work was carried out in the face of as many natural difficulties as can ordinarily be expected in an average dairy as is, accordingly, believed that with good care the rebuilding of the similar herd can be regularly accomplished in from three to five years."

We have not the slightest doubt of it. The Bang method has been proven over and over again to be entirely practical ; first, because tuberculin properly used is a reliable test of the presence of tuberculosis ; and second, because the disease is not hereditary, and the calves born from diseased animals are almost universally healthy.

For four years farm papers have endeavored to persuade the owners of dairy herds and of registered cattle to adopt the Bang method ; to have all the cattle tested by a competent veterinarian ; to separate the sick from the well and in case they were registered cattle of high value, to maintain two separate herds, breeding the diseased herd until their usefulness is largely over or until they show outward signs of disease, raising their calves by hand or on healthy mothers and to sell them subject to veterinary inspection before they assumed the outward consumptive appearance and symptoms.

The beef from tuberculous animals is quite as good as that of the sound, provided the disease does not affect anything but the offal, such as the lunge, bowels and liver. This is recognized not merely in this country, but in all countries. There is any amount of tuberculous meat consumed in European countries, which would be destroyed in this country. It is pretty clearly established that the disease is not hereditary, and hence in the case of registered herds there is a possibility of sacrificing the breeding value.

Next we advise breeders who adopt this plan to sell nothing except subject to tuberculin test. If half a dozen breeders in any state would adopt this method, which is thoroughly practical, selling everything subject to test, other breeders would be obliged to do the same, and the result would be that the small amount of tuberculosis now present would gradually disappear and without any serious loss.

In the case of dairy herds a slightly different method should be followed. These cows are kept not for breeding but for milk production. We would suggest in that case that the diseased be separated from the healthy, fattened for market and disposed of at the earliest period possible. Meanwhile thoroughly disinfect the stables; and in case of old stables tear them down and build new ones with modern system of ventilation.

It must be remembered that tuberculosis is a house disease; that it cannot be transmitted except by the transmission of tuberculous germs; that the healthy animal, with abundant exercise in the open air and living in well ventilated barns, does not readily take the disease even from animals with which it comes in contact. If our dairy herds were kept in the open air, when the weather permits, and an abundance of fresh air was furnished during the severe weather, it would not be found at all difficult to eliminate the disease, which is always an element of danger, not merely to the owners of the herd, but to the cattle interests of the country.

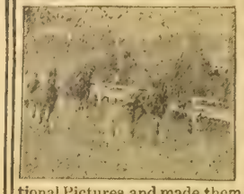
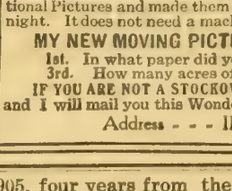
Fattening Lambs.

At all seasons of the year lamb is a most welcome and platable meat. Under average conditions people expect to get it when lambs are from three to six months old, or during August, September and October only. That the true lamb flavor is distinctly characteristic of the meat from lambs considerably over six months old, and, indeed, until they are a year old, is a well-known fact. To think, therefore, that lambs must be sold in the fall, no matter what prices prevail, is a great mistake. Well-fed lambs are likely to command an even higher price per 100 pounds, live weight, in winter months than in the summer and fall.

Average lambs, in field condition, in September and October, may be taken and so fed during the next 2, 3, 4 or 5 months as to make sufficient gains to quite repay the cost of feed. Well-fed lambs frequently bring 6 or 7 or even 8 or 9 cents per pound, live weight, in December, January or February. Average lambs, in field condition, in September and October often sell for three or four cents. Such lambs may be counted on to make at least ten pounds gain in live weight per month. No better market for home grown feeds need be asked than selling it to such animals, counting on the increase in weight to pay for feed.

Yet it is not upon the increase in weight alone that one need depend for a chance of profit. As already indicated, the value per pound, live weight, is likely to be considerably higher in the winter months for fatted lambs than in the autumn for field lambs. Hence, the total increase in value will consist of the buying weight, say, 80 pounds, multiplied by the difference between buying and selling prices, say two cents per pound, equals $1.60, plus the gain, say, 30 pounds in three months, say at six cents, the probable selling price, equals $1.80 or $3.40 in all, an amount not infrequently equal to, if not exceeding, the buying price.

Where such feeding operations are regarded as possible, success may be further insured and the margin of profit increased by making certain preparations. The cutting of the hay, a little on the green side; the housing of the most suitable part, that is, of the clean, bright meadow hay or English grass and clover, in lofts or buildings, convenient to the feed yards, and the fencing in of a nice dry slope or hillock, whereon the lambs might run while on

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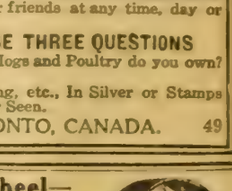

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feed, all help a little. The small field or yard, or at least a part of it, might advantageously have been sown to rape in late July or early August. If another small field, adjacent to the run, could be found, it is a most valuable addition, indeed, to the store of feed and almost a guarantee of success.

Once it is decided to feed, the first thing that should be done is dipping. The presence of ticks or lice means small gains or probably losses. Then shelter from rain or snow must be provided. A warm building is not necessary, but a good roof and a dry, well-littered floor are essentials. The walls should be dog tight and the building should be provided with slatted doors, to permit of free entry of air and so prevent inside temperatures rising much above external. Conveniently located, and properly constructed, feed troughs and racks are a help.

As already suggested, rape is probably the most satisfactory feed for the first few weeks. Some hay should be fed along. If intending to feed a short time only, then add some meal at once. Bright meadow hay, or fine clover hay, and cracked corn, along with rape, means healthy lambs and quick gains, the proper feeds for short-feed lots. Bran and oats, meadow hay, clover hay and roots or rape means growth, the right stuff for early feeding of lots it is desired to carry for more than two months.

Pasturing on rape alone in late autumn (or any other time) is not wise. Some other fields, advisably old pastures, should be accessible. Clean, bright hay, in racks, should always be in reach. Cracked corn should be first, for short feed bunches only. Have some bran along, say, one of bran to four of corn. A good weight of the grain or meal mixture to start with is one-third of a pound per day. They will soon be able to handle more. The rate at which to increase the meal must largely depend upon the length of the feeding period, from two to four ounces per day, according as the periods are to be long or short.

Where rape is not available, then roots (turnips) might be fed at once, but not in excessively large quantities Where fed in the runs, four or five pounds is a fair feed. A good plan, where the root field is conveniently situated, is to hurdle off part of the field. and pasture the lambs thereon. The lambs may be trusted to eat just the right amount provided always that they are receiving meal and have suitable hay where they can get at it readily. If oil cake meal or nutted oil cake is available, it goes exceedingly well along with the turnips, but should have a slight intermixture of bran.

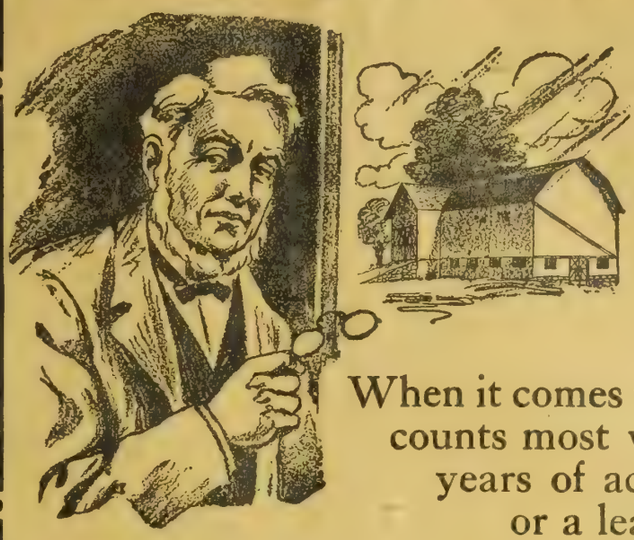
All feeding should be done by a kindly feeder and done on the stroke of the clock. Regularity in time of feeding and in quality of rations means steady gains. Twice a day is often enough to feed. Salt and water should always be within reach, likewise hay. Hay and salt should be kept dry. Salt will be wasted by rain, and hay is not eaten if wet.

For long-feed lambs, roughage, as described above, is about right, but it would probably be better to feed no meal for a time. Start in after a couple of weeks with bran and oats, equal parts, a couple of ounces per day per lamb. Gradually add corn meal or oil cake meal, going up, say, two ounces per day at the end of each week, till each lamb may be getting as high as two pounds of meal per day, equal parts bran, oats (whole), and oil cake meal or cracked corn, preferably oil cake meal at first, and cracked corn the last few weeks.

Quite rapid gains are sometimes made by lambs on proper feed. From thirty to forty pounds in from two to three months may be confidently counted upon. Where it is desired to hold for a longer time than three months, relatively smaller gains for the time on feed may be expected, but good, thrifty bunches will often keep along at the same rate for four or five months. The right start is half the battle.—J. H. GRISDALE.

A Straight Talk To Farmers

By a Farmer



Subject:

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These roofs are in excellent condition and certified as such by practical building inspectors.

Think of it! For over twenty-five years scores of "Eastlake" shingled roofs have withstood the ravages of all kinds of weather—the lightnings and torrential rains of summer—the hail, snow and sleet of winter, and yet they are in perfect condition to-day.

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You find that it is merely a claim—and claims alone will never satisfy the shrewd buyer.

He rightfully demands proofs. He wants to know on what grounds the claims are based.

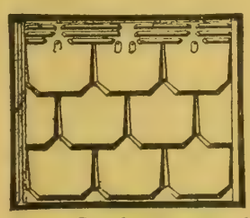
Unless the article has successfully undergone an actual test, a paper guarantee appears a joke.

Many times it is a cloak to hide some weakness of the roofing it guarantees.

Ask your lawyer about it. He will tell you that, stripped of its exceptions and provisions, all high-sounding phrases, little else remains.

It really guarantees nothing.

Kind of risky when the guarantee is as leaky as the roof it guarantees.



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THE HORSE.

The Bone that Wears.

"No hoof, no horse," is an old horseman's adage that finds verification wherever horse power is employed. It might be said with equal properiety, no bone, no hoof, for the good hoof invariably accompanies the fine, hard bone; or to put it negatively, a good hoof rarely accompanies a poor quality of bone.

When we say that a horse has bone of good quality, we mean in general that the entire bony structure of the horse is of good quality, but in a more specific sense we refer to the bones and tendons found in those parts of the horse's limbs below the knee and below the hock. The term "flat bone" cannot be translated literally, for we all know that the bones of a horse's leg are not flat. Yet the horseman tells us that a horse must have "flat bone," shaped like a razor with the heavy part forward, the edge back. By this he means that the tendons which act upon and in conjunction with the bones should set well back from them and should be free from all meatiness or excess tissue of any kind. It is therefore the tendons which form the "flat bones," just as it is the excess of meat and connective tissue wrapped about the tendons which causes the so-called "round bone." The bone itself is as round in one case as in the other, but the designation is as in the other, but the designation "flat" is used when the tendons stand back to give a razor-like shape to the leg, while "round" refers to the condition when there is so much useless tissue around the tendons that the leg as well as the bone is round or nearly so.

But why do we want "flat bone" in a horse? Is he any more useful because his leg happens to be flat instead of round? Is he any more active, or can he do any more work because his tendons are clean cut and free from meatiness? We can answer both questions in the affirmative, and then the story is not half told. Indeed, a horse is more useful because his leg happens to be flat instead of round. He is more useful because his tendons are placed in a position which gives him the greatest possible leverage at the joints. He is more useful because his tendons act freely and cause full flexion of the parts moved. Because of these facts he is, of course, more active and can do more work. Lastly, the clean cut tendons mean hard, flinty bone and that means freedom from splints, spavins, curbs, sidebones and all the other ills that horse bone is heir to. There is a harmonious relation between all parts of the body so that an indication of coarseness in one part finds its counterpart elsewhere. A loose, meaty structure in the tendinous parts of the leg is an indication of a relatively loose and soft bony structure, and it is this kind of bone that is subject to all sorts of malformations. Besides this, the limb which is overburdened with useless tissue is the one that will be most readily affected with windpuffs, bog and blood spavins. The tendency to looseness in structure extends to the hoofs and opens the way for quarter crack, contracted heels, etc. Investigators tell us that, other things being equal, the tendency to scratches and grease is much greater with the "round" than with the "flat bone."

After considering all these points we are better able to understand the importance of the "flat bone" in horses. It is a guarantee of quality and quality is the guarantee of endurance.

Observing Teamster,
Pictou, N. S.

Skilled Herse Feeding.

No people in the world are more skilled in horse feeding than the French. For hundreds of years they have tested methods of all kinds of feeding, and among the rules laid down the most important is that three meals are necessary and sufficient with an intervale of four or five hours between, to keep a horse in good condition. Oats take at least two hours to digest, hay takes three hours, and because it takes so long to digest it should be given when the days work is over. The evening meal should be a full meal, the animal being then at rest, and able to digest its food at leisure. There should be an intervale of half an hour between the return of the horse to the stable and his getting his evening feed. Too much food at a meal or too long abstinence between meals, followed by voracious feeding, is conducive to colic and indigestion. Irregularly fed he is given to showing his impatience by letting his hoofs play about the woodwork of his stall. Giving "refreshers" at odd times is also bad. Remember that both stomach and bladder should never be loaded in work time, whether light or heavy work is done. A horse, therefore, should not be ridden or driven immediately after a meal, on the same principle that it ought not to be fed sooner than half an hour after work is over. Between one end of the year and another a horse consumes an amount of dry healing food which calls for special regimen to neutralize the excessive protein consumption that has taken place. Thus, in autumn, a ration of oats is good, and so in spring, at the fall of the winter coat, a little green meal is beneficial mixed with hay and oats, for the evening meal. Another maxim much disregarded in practice is that the horse should be watered long before being put to work, and then sparingly.—Ex.

Perfect and Imperfect Actions.

EDITOR MARITIME FARMER.

In the light-horse breeding the most important factor in the success or failure of the breeder's effort is action. It has always been recognized as a feature of paramonent importance, and of late years probably it has received more attention than at any previous time in the history of horse-breeding. There are different kinds of action suited to the requirements of the various breeds, but, without doubt, the most pleasing action, and that which draws a crowded ringside, is that which the modern Hackney typifies. As the action of the breed has developed to the wonderful perfection seen in its best representative to-day, so has the standard, which breeders and buyers alike adhere to, been raised. This standard, however, has not been achieved without concentrated effort, and has only been evolved in the course of time, establishing a higher ideal to work up to. Time was when the breeder regarded a showy display of the fore-legs as the leading equipment of a harness horse, and, without minimizing the undoubted importance of that phase of action, it is not too much to say that more attention is now paid to the manner in which the harness horse uses his hocks.

Not many years ago a popular type of hackney in vogue was required to raise his knees breast high irrespective altogether whether there was range in the action or not. It was seen by short experience of this type of action, that there was a screw loose somewhere, as the feet of the average horse could not withstand the excessive strain thereby put upon them. Accordingly breeders came round to the modern view of what a harness action should be, and nowadays one rarely sees other than good shoulder action, with forelegs well extended, and the ease and grace of the animal thereby benefited. It is true that we miss the "snap" of the knee, which at one time was a very much-prized feature. But what has been lost in this direction has been more than gained in the way of a little extra speed and more graceful movement.—Horseman, Fredericton.

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POULTRY.

Getting Ready for Spring.

It is now time to be making plans for our spring chickens, if plans have not already been made. There is no doubt but many will start with pure bred stock, that have heretofore been content with a mixture of everything, or at best, by the use of a pure bred male to use on any old hen.

A good many farmers have an idea that they must cross up three or four breeds in order to get eggs. Perhaps they are like the man of whom I read. He said he liked to buy hatching eggs at the store to see how many different colored chicks he could hatch.

Many run away with the idea that all pure blood fowls are inbred until they are constitutionally weak. No doubt some are, but how about the mongrel flocks that have been bred for years without the introduction of new blood, and are all sizes and colors? Why does not the same rule apply to them? We all know that an egg in winter, from such flock, would put the owner into hysterics.

Such reasoning is all tommyrot when you stop to consider the matter. A man can have pure blood fowls, and can get an unrelated male each year if he wishes and the new blood will have just as much effect on the constitution and on egg production, as though he crossed two different breeds. In the first instance, he will get a uniform flock of pure bred chicks, and in the second instance, he gets nothing of value for next season's breeding pen, but hens good only for eggs and poultry, and if he wants more of the same blood it is necessary to get another breeding pen and cross again.

You first want to get the idea into your head that pure bred fowls will lay as many eggs as cross bred fowls, and that in every other particular they are superior. When you have gotten thus far, you are ready to make a start.

There are two ways to get started, one is to buy eggs for hatching and the other is to buy a pen of birds from which you produce your own eggs. The cheapest way is to buy one or two settings of eggs from which you can raise a few good breeding birds, and the second year you will have sufficient eggs to make a good start. In this case you can continue with your old stock one more year, or until your pure breds are old enough to produce eggs for hatching.

Eggs can be had for one dollar a setting from good utility stock, and I would not advise one to pay a fancy price, for what would be called fancy by most of us. $5.00 a setting gets only a third class setting from a breeder, who gets $15.00 per setting, by reason of his reputation as a winner at the big shows, and an amateur, who has got to learn the fancier's business, would not be able to mate his birds so as to produce Madison Square winners, if he had the best of stock, until he studied the breed and learned their characteristics. It is much better to start slow, and not part with too much money for fancy stock. Start for good stock and let your aim be eggs and poultry and if that leads you to be a fancier, you will become a fancier through gradual selection and improvement of your stock and while you are learning to be an expert, you will have been getting a profit from the production of eggs and poultry and your experience will have cost you little.

Whatever you hatch try and get out a good batch of chicks in April. If you can't do this then hatch in May, and if you can't hatch in May, hatch in June, rather than not at all.

Last year I hatched 80 chicks the 10th of June and some of these pullets commenced to lay the first week in December, but it is better to have them more mature when they start laying. February and March chicks, if forced right along, are quite apt to go through at least a partial moult in midwinter, thereby interrupting egg production when prices are high. This applies to the medium or smallest breeds. Plymouth Rocks and the larger breeds need more time to mature, if of standard size, and may be hatched earlier.

D. I. J.

Egg-Eating Hens.

You may think there's some cussedness back of it all, but there isn't While a hen acquires the habit, through necessity, she may become a confirmed sinner in this regard, just as a cow may develop into a self-sucker. At that stage the habit is hard to break.

While any hen is apt to eat an egg, that is accidently broken in the nest, she may not be a regular egg eater—one that will deliberately break an egg and eat it. This suggests the need of plenty of nests and plenty of straw in each, so the hens will not have to quarrel for a place, and if there is a scuffle the egg will not be broken.

But the need of lime is the main cause for egg eating. The hen craves that which is required in shell construction and to satisfy it she turns upon her own product, just as the meat-hungry sow devours her own pigs.

Keep crushed oyster shell grit where the poultry can help themselves. When you find them eating eggs, go and see if the shell box isn't empty. You must supply them with lime or they will eat egg shells. Old plaster does fairly well, but nothing is nicer than oyster shell.

Live and Dead Weights.

It is a question whether to sell the turkeys live or dressed. The following notes may be of assistance:

The loss of turkeys bled and with only feathers removed is small.

If the head is off and the entrails out the loss is about one-tenth of the weight.

Toms weighing alive 31 1-2 lbs., weighed after bleeding and picking 29 1-2 lbs., a loss of about one fiftenth. Ready for the oven they weighed 28 1-4 lbs, a loss of nearly one-tenth.

If dressed turkeys were 20 cents per pound on the market one would need to get 18 cents per pound of live weight to realize the same money for the turkeys without counting the cost of dressing.

Turkeys will not fatten in a strange place. Better feed in the usual place, increasing the amount fed until a week or ten days before Thanksgiving. While a chicken can stand from three to six weeks of confinement and feeding, turkeys will steadily lose in flesh. Ten days confinement is the the most they can stand, and they won't stand that in an entirely strange place. Try if possible to confine them in a familiar building. Better leave them at large till the night before marketing than confine them where they are dissatisfied.

Market old toms and heavy turkeys at Thanksgiving. Such birds will put on very little flesh between Thanksgiving and Christmas and will eat a great deal of corn. Besides, the Thanksgiving market calls for a larger bird than does the Christmas market.

Ventilation.

Ventilation, by means of roof ventilators, is opposed by many poultry keepers. Plenty of fresh air should be admitted in winter as well as summer, but it should come in very gently. Rushing in at a ventilator is much the same as rushing in at cracks and holes in the boarding. The results are the same, frozen combs, roup and colds. The best ventilators are windows, or at least the upper or lower part of one covered with thick muslin. Muslin does not let air through easily. Draughts do not come through it, but the air gets in just the same, gently and well filtered. These muslin ventilators can be put on frames and hinged to the window, leaving them free to throw open on sunny, warm days in winter giving the house extra airings.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B.

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And I can tell you, Salt plays a very important part in butter making.

Give me good cows and Windsor Butter Salt, and I will win the prize every time.

At the big fairs for years, practically all of the prize winning butter makers have used it.

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The Ordeal; or, the Spring and Mid-Summer of a Life.

(Continued from last issue.)

Sorrow had not left her unthankful or rebellious; it had given her a true estimate of life—only the threshold of existence; beyond its changes was the better, heavenly country, where she was to dwell forever. Here she had her task set by the Master of the Household, and, so far from bending under it, she accepted it joyfully, with new energy, new aims, new hopes of hearing the sentence of reward.

From the first moment of her widowhood, the desire rightly to train her children had conquered the lonely yearnings of bereavement; to be to them father and mother both, to gain the firmness and worldly wisdom that their father would have supplied, and to lose none of the watchful tenderness of a mother's love was her steady aim. Many weak and selfish women would have considered themselves unable to do more than feed and clothe these helpless children, grieving under the necessity; but Mrs. Austin knew that this was a small part of a parent's duty, and as soon as her strength allowed, opened a day-school of such pupils as could be gathered, and set herself steadily to the task of providing the means for a complete and necessarily expensive education.

Eight years of patient routine had passed, sometimes weariness, sometimes beyond her strength, but ever borne with steady cheerfulness, outwardly at least. If she had her hours of despondency, and days when the accomplishment of her hopes seemed far off and doubtful, they were known only to the Friend, whose strength upheld her, and the Father, who, in caring for the "lilies of the field and the fowls of the air," gave her a pledge that she should not be forgotten in such things as she had need of.

From Carrol, the eldest of her children, she had never had a disappointment. In intellect and heart, he was all that she could desire; even when a child at her knee, he seemed to enter into her thoughts with a strange, unchildlike sympathy, and learn as by intuition the beautiful faith in God's fatherly providence, and the wondrous debt of love and gratitude he owed to the "dear Jesus," who had come from heaven to be laid in a manger and die in manhood a sorrowful death for our sakes, and, listening to his simple pictures of the beautiful heaven the angels would take him to when he died, if he tried to please God, or the earnest and solemn asking that he might be made good and holy, a new hope sprang up and glowed in his mother's heart, and, like Hannah of old, she "lent him to the Lord as long as he lived."

When Anne went about the house in her dreary, abstracted way, or Ellen's strong will rose up against her mother's authority, or Ben, with the boisterous naughtiness of a strong, healthy boy, made her tremble for the time when he should follow Ellen's example and set her rules at defiance, it was to the thought of Carrol and his future that she turned to brighten the hope for the rest; but Ellen's wilful words made her despond even here, the night of the rejected invitation; perhaps she had been self-deceived, and only indulging a blind partiality in giving Carrol the advantages he had received. Had she been unconsciously wronging her other children for his sake? She felt all that had influenced her—the hope that he would one day stand up in his father's place, and the desire that mind and heart should be fully furnished for the Master's service—but her disappointment with Carrol might be at hand; he might not feel the claims the younger children would have upon him, he might not wish to devote himself to a life of self-sacrifice, such as any laborer in the harvest must needs live if they would impress others with the reality of their creed and bring their needs to the scanty wages doled out grudgingly oftentimes by the congregations. Her own health might fail before the rest had been provided for, it was not as strong now as it had once been, with all her care, and then she had wronged her younger children for a need that existed only in her own imagination perhaps. It was the hardest form in which doubt could come to her, she was so watchful and jealous always of her own motives; but it made her resolve to do what she had shrunk from again and again—set before Carrol her highest hopes and aims for him, and if the answer was a disappointment, she could only pray for strength to bear it.

The day had been warm, almost oppressive, but the evening grew cold and chilly. The very atmosphere added to her depression, as she unlocked her writing-desk; and then rose, as she heard a stir in the adjoining chamber, to see if the children were all asleep. Never, since the night that she had first gathered them around her, fatherless, had she felt such a sinking apprehension of their future. But they were in her care still, sheltered by a home, sleeping softly and deeply, as only the young or those to whom "He giveth sleep" can rest, and she went back to her letter again.

"I have never told you, my son, of the highest aims I have had for you. Whenever you have talked of your future course, you know I have always put you off with 'time enough by and by.' I had two reasons. One—cowardly, perhaps—I have not been ready for a disappointment; and the other, I had hoped you would make an unbiased choice, such as I desired, for I have sometimes seen your thoughts go out that way, and it has made me happier than you could believe. I have your last letter by me. Frank, affectionate, open as you ever were, you tell me of all you are doing and of your friends. I am glad Mr. Bradstreet is so kind to you, and that you try to have a good influence over his son. You know that I have always told you our influence is one of our chief talents. How much less dread fathers and mothers would have of college life were it not for the evil influences that meet their children there!

"I wish I could see the pretty Lucy you have written me so often about this winter; but, Carrol, I need not warn you that she can never be anything more to you than the sister of your friend. Men of wealth ever seek wealth for their children; and, besides, years must pass before you can afford to make any one your wife. Even were she willing to marry a poor man, and her father willing to have her, you could not selfishly bind her to such weary waiting, a vigil that wears out a woman's health and spirits, in looking towards an unfulfilled destiny.

"It is time now that you should seriously set yourself to consider what you will be. You have no connections to help you on in mercantile life; there is the law, with its slow results; teaching—you have seen something of that; and the ministry. My hand trembles as I write it, my dear son, for the wish of my life is inclosed in it. The first-born of old were ever consecrated to God, and when you were a baby in my arms, and I read of this, it impressed me with a strange, haunting force. God had been very good to me, and I desired greatly to make Him some worthy offering, and so far as it lay in my power to train you up for Him, I resolved to do it. What had at first the vagueness of a fancy strengthened into a vehement desire, into the great purpose and hope of my life, to send out one torch-bearer to the multitudes that sit in darkness, to kindle one faint beacon-light that should warn some misguided soul from hopeless loss, to see my child entering on the noblest pursuit this side the grave. Not that I would have you biased to this by my feeling or the wish, on your part, to save me from disappointment. Far from it. The offering would be worthless in God's sight, unless it is of your own free will—unless you have yourself felt moved to lay aside all worldly projects and ambitions, or, rather, to merge all ambition into the noblest aim a human heart can have, to be 'a fellow-laborer with Him!' I should only defeat my own purpose, and kindle a strange fire upon His altar.

"Do not write me at once. It requires deep thought, and more than thought. I feel very near you to-night, and as if you needed me—as though some solemn crisis in your life had come, and you were turning to me for help. You know where to look for the help and the counsel that your mother could not give, even if she were with you. If you were here, I should only smooth the hair from your forehead, and kiss it softly, and say, 'God bless and keep you, my son!' as I do now."

CHAHTER III.

"Coming 'round to tea, Austin?"

"Does any one expect me?"

"I don't know who 'any one' is. Lucy told me to be sure to ask you, and father seconded the motion."

So the two young men walked off arm in arm, talking of the chances for valedictorian, soon to be decided, the prospects of "the United Brothers," their favorite society, and the boating-club

Ask Her This Question

"Do you know of any woman who ever received any benefit from taking Lydia E. Pinkham's Vegetable Compound?"

If any woman who is suffering with any ailment peculiar to her sex will ask her neighbors this question, she will be surprised at the result. There is hardly a community in this country where women cannot be found who have been restored to health by this famous old remedy, made exclusively from a simple formula of roots and herbs.

During the past 30 years we have published thousands of letters from these grateful women who have been cured by **Lydia E. Pinkham's Vegetable Compound,** and never in all that time have we published a testimonial without the writer's special permission. Never have we knowingly published a testimonial that was not truthful and genuine. Here is one just received a few days ago. If anyone doubts that this is a true and honest statement of a woman's experience with Lydia E. Pinkham's Vegetable Compound write and ask her.

Canifton, Ont.—"I had been a great sufferer for five years. One doctor told me it was ulcers of the uterus, and another told me it was a fibroid tumor. No one knows what I suffered. I would always be worse at certain periods, and never was regular, and the bearing-down pains were terrible. I was very ill in bed, and the doctor told me I would have to have an operation, and that I might die during the operation. I wrote to my sister about it and she advised me to take Lydia E. Pinkham's Vegetable Compound. Through personal experience I have found it the best medicine in the world for female troubles, for it has cured me, and I did not have to have the operation after all. The Compound also helped me while passing through Change of Life."—Mrs. Letitia Blair, Canifton, Ontario.

Any woman who is sick and suffering is foolish surely not to give such a medicine as this a trial. Why should it not do her as much good as it did Mrs. Blair.

some of the fellows wished to establish.

Mr. Bradstreet welcomed them to the tea-table, and sat there listening to all their boyish jokes and opinions, saying kind things to Carrol of his good prospect for the first honor, and finally telling him that, when he was tired of Lucy's piano and the chess-board, he should be glad to see him in his library. He was a generous, kind-hearted man, who had not forgotten his own youth, and he lived it over again in the freshness of these young lives—in the bright blush that kindled upon Lucy's face when Carrol was commended, in the Jonathan and David devotion of the two students, and all their little piques and ambitions, looking upon the honors of Commencement Day as if the interests of a nation were at stake, and the applause of the whole community awaiting the fortunate men, or the execrations of prosperity reserved for the idler of his class.

Out of his counting-house, Mr. Bradstreet's chief pleasure was the happiness of his children. The stately home had lost its greatest charm when their mother, with whom and for whom it was planned, had been carried forth to her burial from it. Lucy was very like her, in face, in voice, in all her gentle, yet decided ways, in her quiet good sense, as well as her feminine grace. Lucy must never be crossed in anything. It cost the father much less to check and restrain Henry's quick, headstrong impulses than to deny Lucy a flower she had set her heart on. The beautiful grounds were kept up to their original elegance to gratify her taste, rather than his pride; the greenhouse, with its wealth of tropical flowers, was at her command. And yet Lucy Bradstreet was unselfish and unspoiled. There are some flowers that open more perfectly in the broad sunshine than with the succeeding light and shade that belong to others.

Had Mr. Bradstreet forgotten his usual wisdom when he brought these two young lives in such close companionship? The dearest thing on earth, Lucy's happiness—had a weak indulgence brought it in jeopardy? It would seem so, that evening above all others, when he had shut himself up in his library, not to walk with the wisdom of the past, or take the bright, hopeful voice of the present for companionship, but to go over, with pen and pencil, the day's operations, count up the thousands he would gain by the morning's fortunate investment, and recongratulate himself on the cautious financiering that had evaded a threatened loss.

Hal Bradstreet had his own engagements, too—a pending rehearsal of the serenade his ladylove was to receive, in connection with the ladyloves of five other amateurs, whose ardor had undertaken to conquer the difficulties of an adagio in E minor, no trifling obstacle to these unscientific musicians.

The soft May evening, the first true spring day of the season, had allowed open windows and unfurled the great buds of the horse-chestnut trees of the avenue, the month going out in a flush of loveliness and the calm of early summer. There were no lamps called for; it was moonlight again, and the opal rays of the sunset had mingled so softly with its silver that the white keys of the piano, at which Lucy sat, had not grown dusky, though dim shadows slept on the velvet carpet. There was a soft rustle of muslin drapery at the tall windows, opening on the lawn, in its first vernal freshness, a glimmer of carved gilding from cornice and ceiling, a gleam of the white limbed statute in the opposite niche, and again the subtle breath of rare flowers, scattered profusely in every vase and goblet of delicate Sevres or curious Bohemian workmanship, throughout the room; above all, that low, delicious melody of voice and instrument, snatches of half-remembered songs, and murmuring preludes, and wandering chords, as memory or fancy guided the slender hands. No wonder that the brave purpose of the young man's heart melted under these enchantments, and he forgot the repeated vows of self-restraint and self-denial he had imposed upon will and emotion. He was leaning near the instrument, and presently bent down his head upon his clasped hands, and gave himself up to dreams of delicious possibilities.

How many veritable lives had gained as lofty prizes, as far beyond their reach! What was the use of talent, and resolve, and energy, if it could not carve out fortune? And Lucy loved him; yes, he could not doubt that, and she would be true and wait for him, as many another true heart had done, and when he could make for her a home like this, she would come to him and be his own, and life should flow on all brightness. But even in the midst of heated vision, the slow and solemn chords into which Lucy had glided, seemed to bear the burden of an anthem he had heard when they buried poor Richmond, their classmate: "For man walketh in a vain shadow, and disquieteth himself in vain; he heapeth up riches, and cannot tell who shall gather them. This is not your rest." But he drove the echo down, and went on with his dream again. How the opening door jarred upon his feverish pulses. The dream was over; it was late, much later than he supposed, and Mr. Bradstreet had sent for him.

"Shall I say good-night, Lucy, or will you be here when I come out again?"

"I will wait."

The simple words seemed like a prophecy to his excited mood; but then a chill suddenly broke the charm. Mr. Bradstreet must have a special reason for wishing this interview. He had made such a point of it, perhaps he had seen all that was passing, and was displeased. But he was unchanged in manner towards him? Still, that would be Mr. Bradstreet's way; he would not give unnecessary pain or be rudely uncourteous, however he was offended. So with the fear of sudden banishment, or reproof, at least, darkening down upon the bright visions of the last hour, he followed the measured footsteps of the old servant.

(Continued next issue.)

"SILVER PLATE THAT WEARS"
Correct Silverware
For style, beauty and wearing quality choose knives, forks, spoons, etc., that bear the trade mark
"1847 ROGERS BROS."
In buying Tea Sets, Candelabra, Trays, etc., if you want the best ask for the goods of
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Cowan's "Perfection" Cocoa
Let the children drink all they want. Healthful, nutritious, delightful.
Absolutely pure. That rich chocolate flavor.
Very economical.
The Cowan Co. Limited, Toronto.

Fever Sores.
Fever sores and old chronic sores should not be healed entirely, but should be kept in healthy condition. This can be done by applying Chamberlain's Salve. This salve has no superior for this purpose. It is also most excellent for chapped hands, sore nipples, burns and diseases of the skin. For sale by all dealers.

LOCAL TREATMENT FOR WOMEN'S DISORDERS

The health we enjoy depends very largely upon how the blood circulates in our bodies; in other words, if we have perfect circulation we will have perfect health.

There is a constant wearing out of the tissues in every part of the body. The blood flowing through the veins carries off this waste or dead matter, while the blood coming from the heart through the arteries brings the fresh new living tissue, the essence of the food we have digested, to replace what has been carried off. This constant wearing out and expelling of the dead matter and the replacing of it with new matter, atom by atom, goes on day and night, until in about 7 years a complete change has been effected. Thus every man and woman has an entirely different body in every particle of it from what he or she had 7 years before.

It sometimes happens, however, from a variety of causes, that the blood becomes congested in certain portions of the body. This means that the blood vessels in these parts become weakened, and the circulation in that section of the body becomes sluggish and stagnant. The consequence is that the dead matter in that part of the body is only partially carried away, and that but little of the new, vital matter is introduced there to build up and strengthen the tissues and nerves.

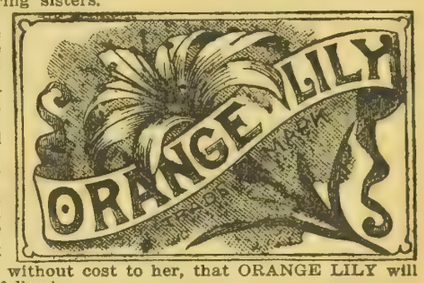
This condition invariably exists in all cases of female disorders. The dead matter retained in the circulation, which should have been expelled, causes irritation and inflammation of the delicate memberane, and oppresses the nerve centres. This condition is the cause of the grievous physical and mental suffering which accompanies female troubles.

To obtain relief it is evident that the first thing to be done is to get rid of the dead matter which is being held in the circulation. If this dead matter is allowed to remain there a species of blood poisoning will result and nature will endeavor to get rid of it by forming ulcers, tumors, etc.

The above explanation will also show why ORANGE LILY is so successful in curing this condition. It is a local treatment, and is applied direct to the affected organs. Its curative elements are absorbed into the congested tissue, and from the very start the dead matter begins to be discharged. A feeling of immense relief, both mental and physical, accompanies it, and the improvement is constant and positive. This feature of the expelling of the dead matter is always present to a greater or less extent, and in some cases it is so marked as to be amazing. The case described in the following letter is not exceptional:

Dr. Coonley—I am thankful to Mrs. F. E. Currah, your Canadian representative, for my health restored by your wonderful remedy. I have suffered for 17 years, but not so bad until 3 years ago. Then I had a doctor, who told me I had a tumor, and could live no more than a year. If I went through an operation I would not live through it. A year later I sent for him again, and he gave me up to die. My husband then sent for another doctor, who performed an operation, and it did me much good. I doctored with him 3 or 4 months, but became so bad again that I thought I could live no longer, and I began to long to die. One day my husband came home and threw a slip of paper to me with Mrs. Currah's address and told me a lady had advised him to write to her for a treatment that would cure me. I said it was too late, that I would die anyway. I could not lift a teacup without hurting me. Then the first doctor told me I was worse than ever. However, my husband sent for ORANGE LILY, and the third treatment brought away one tumor. Others followed, until 7 tumors had been expelled, 3 large ones and 4 small ones. I know if it had not been for ORANGE LILY I would have died, for I could not live much longer. I would have thought it cheap at one hundred dollars for a month's treatment, instead of one dollar. It is worth its weight in gold.—MRS. GEO. LEWIS, Huntsville, Ont.

The above letter is published with Mrs. Lewis' permission. All letters received are treated as being sacredly confidential, but occasionally some patient feels so grateful for being cured that she is willing to make the matter known for the benefit and encouragement of her suffering sisters.



ORANGE LILY is a positive, scientific remedy for all disorders of the female functions. As explained above these troubles are of local origin, and require local treatment. It is just as sensible to take medicine internally for female troubles as it would be to take medicine internally for a bruise, a boil or an ulcerated tooth. In all these cases some dead matter is being retained, and the cure is effected by employing local methods for expelling the dead matter. ORANGE LILY has antiseptic, soothing and healing properties, and also tones up and invigorates blood vessels and nerves. I am so anxious that every suffering woman may satisfy herself, without cost to her, that ORANGE LILY will cure her, that I hereby make the following

FREE TRIAL OFFER

I will send, without charge, to every reader of this notice who suffers in any way from any of the troubles peculiar to women, if she will send me her address, enough of the ORANGE LILY treatment to last her ten days. In many cases this trial treatment is all that is necessary to effect a complete cure, and in every instance it will give very noticeable relief. If you are a sufferer, you owe it to yourself, to your family and to your friends to take advantage of this offer and get cured in the privacy of your home, without doctors' bills or expense of any kind. Address MRS. FRANCES E. CURRAH, Windsor, Ont. 7

PURE SURE
MAGIC BAKING POWDER.
PURE FOOD INSURES GOOD HEALTH—

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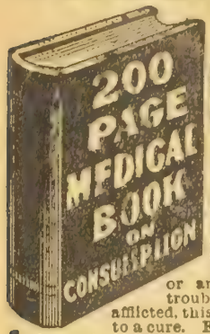
Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1453 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait—write today. It may mean the saving of your life.

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Manufacturer and Designer in all the best grades of Marble, Granite and Freestone. All orders will receive careful attention and prompt delivery. Good workmanship at lowest prices.

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Marble and Granite Dealers,

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SAVE MONEY.

Buy direct from the producer and save the middlemen's profit. We are large growers of Celery, Cabbage, Beets, Carrots, Parsnips etc. We ship to all the Maritime Provinces and have supplied critical buyers in Montreal and Toronto with our celery and other vegetables. They say our celery down by the sea has a flavor not to be had elsewhere.

J. J. GAY & SON,
Charlottetown - P. E. I

Bandages, and What to Make Them of.

Old household linen makes very good bandages, and, short of being rotten, the older the material the more comfortable it will be. Unbleached muslin or factory cotton is mostly used for making the hard roller, the triangular, the T, or the many-tailed bandage. Cheese cloth makes a nice soft bandage to use when dressings are to be kept in place, but no pressure required.

A simple triangular bandage may be used with advantage in cases of emergency, or for keeping in position such applications as poltices and compresses or dressing where a uniform support is of no moment. This bandage is easily made. When folded up into a cravet it can be used as a constrictor on a limb where there is profuse bleeding. For fracture of the small bones in the arm it can be made into a sling to support the forearm. The ends of the bandage should be tied around she neck so that the hand will be higher than the elbow. If the long bone in the arm is broken use the sling to support the hand and wrist only; keeping the hand at an angle below the elbow. This makes the forearm act as an extension and keeps the bone in a better position,

For a wound in the head put a triangular bandage on as a cap. Start in the centre of the forehead, bring the long ends lower down and cross at the back of the head, then back to the forehead and pin. The third end is folded over the long ends where they cross, and pinned. This makes a good cap and cannot be easily pulled off.

For the shoulder and axilla, fold the bandage like a cravat, bring from the under arm, cross on the shoulder, and carry over the chest—one end before and one end opposite to the axilla, where they are tied or pinned.

The T bandage, and the many-tailed ones are prepared from pieces of muslin of different lengths and widths, torn from both ends into two, three or more tails, up to within about three inches of the centre; the length and width being regulated according to their application. They may be used to hold temporary dressings in place for a fractured jaw, shoulder bone or on the chin, head and abdomen.

The hard roller bandage is the hardest to make and also to put on. Usually they are made of unbleached muslin from four to six yards long and two to four inches wide. They should always be torn and the selvedge removed, then rolled into a hard, even roll.

In applying the common hard roller one must learn how to distribute the pressure evenly about the limb so as to give the firmness and support required. Begin at the lower extremity of the limb and bandage upward. Keep the bandage rolled up in your hand to within about three inches of the part; use the finger and thumb of your left hand to keep it in place when applying. This requires some practice, but it is easily learned.

Flannel bandages are cut on the bias of the goods and evenly rolled. They are easily put on, and are used in cases of swelling of the limbs, and also under plaster paris casts to protect the skin.

Plaster bandages are not often called for in a home. They are made of crinoline cut into strips about five yards long and four inches wide. Plaster is rubbed into the meshes. To do this lay the bandage over the table, rub in the plaster with the left hand, and roll loosely with the right. Wrap each bandage in paper and keep in an air-tight can until needed.

Crinoline or mosquito netting bandages are used when a slight stiffness is required. Just before using they are wrung out of the water. This helps the stiffening, and the bandage is very light.—Mrs. Gundry, Goderich, Ont.

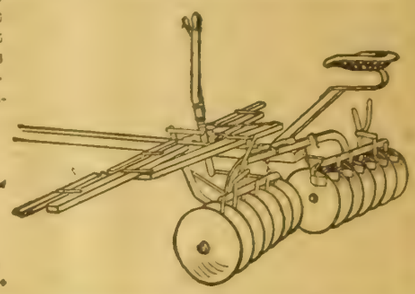
Hints for the Home Seamstress.

HEMSTITCHING.

In hemstitching a handkerchief or napkin, the hem is often so narrow that it is hard to hold. This difficulty may be overcome if a strip of cloth

The "Bissell"
is the lightest-draft harrow

Because of its astonishingly light draft time after time the "Bissell" Disk Harrow, in field competition, has done DOUBLE the work its competitors have accomplished under same conditions. The special shape of the "Bissell" Plates allow them to enter the ground easier and turn the soil with less effort. Steel blades, meeting the plates "Chisel fashion," keep the plates thoroughly clean. The space between the plates is kept clear of trash by movable clod irons—the only Harrow that has this feature. Sand bands protect the ball bearings from dust. The seat is placed back of the Harrow. In this way the weight of the driver rests over the frame, and neck weight is removed. The hitch is well back which is still another draft—reducing feature. Search the continent over and you'll not find a Harrow of such light draft and correct proportions as the "Bissell." For further particulars write Dept. M. for catalogue or see your local dealer.



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Company, Limited,
ELORA, - ONT.

Here Are the Two Strongest Fence Locks Ever Made

The Frost Woven Fence Lock is the strongest and most secure Lock known. It will not work loose or slip.

One reason is because it possesses more inches and weight of Wire than any other Lock. But the principal reason is because the Frost method is the most practical.

Note the peculiar, powerful-looking "Knot." Then see the wonderful triple "Wrap," with its ends cut close. (These closely-cut ends prevent springing.) This triple "Wrap" makes the Frost Lock doubly secure.

The picture, alone, of the Frost Lock should prove that no other Lock on earth is so secure.

Lateral Not Kinked

The Frost Lateral is not kinked.

The Lateral in nearly every other Fence is kinked. This weakens it. And when subjected to great strain: snap! she goes. Because all contraction-strain falls on the Lateral.

No other Fence Maker can make this Lock. We own the patent. And we build our Machines in our own Machine Shops.

So, you see, this wonderful Frost Lock cannot be duplicated—nor even imitated.

Frost Metal Lock

The Frost Field-Erected Fence Lock permits the use of No. 7 Hard Steel Stays (a sizes larger and heavier than the Uprights used in Woven Fence). These are immovably bound to unkinked coiled Laterals.

The Lock on the best other Fence made is about 60 per cent. weaker than the Wire.

But the Frost Lock is the strongest part of the Frost Field-Built Fence. Fallen trees, and other unusual tests, which have smashed other Fences to smithereens, have left the Frost uninjured.

This Frost Lock is the safest Field-Built Fence Lock ever made. It is the only secure Lock which will not injure the Wire in a Field Erected Fence.

Make Our Own Wire

There are extreme weather changes in certain sections of Canada which mean a mighty short life to most Wire Fence.

Very little Wire is made to fight off this Wire enemy. Such Wire might fill the bill in some climates, but it's simply unfit for Canadian conditions.

Heretofore we used ready-made Wire ourselves. But we had it made under our own specifications. It always gave good satisfaction, but we wanted better. The only way we could get it was to make it ourselves. So that's what we're now doing.

We've engaged a Wire Expert with 25 years' experience behind him. And we've built special Wire-Making and Galvanizing Mills, and installed the most modern machinery made.

Through scientific Annealing, all Frost Wire is even in temper. It will stand against Canadian weather, no matter how severe.

Two-Thirds of Its Life

Two-thirds of the life of a Wire Fence depends upon its Galvanizing. When this two-thirds is killed—eaten away by rust—the other third is as good as dead.

Yet nearly all Wire is Galvanized too thinly. And, besides, it's merely "coated." That's because Zinc costs four times more than the Wire itself.

(We pay the highest price for Zinc,—and get the best.)

But Frost Wire is Galvanized doubly thick. And it is not merely "coated," either. The Zinc goes down into the Wire, making the Galvanizing a part of the Wire itself. This prevents Frost Wire from scaling.

This is possible only by the Frost "Pickling" and "Cleansing" process. It simply scours Frost Wire of every particle of grease and scale, leaving it as clean as a pin.

Frost Galvanizing will now stick to the Wire through thick and thin. No Galvanizing enemy can rust it. That's why the Frost Fence will last 12 to 15 years longer than most others.

Send for free Booklet and Samples.

The Frost Wire Fence Co.,
Limited
Hamilton, Ontario

Agents Wanted in Open Districts

"Frost" Fence

When writing advertisers please mention the FARMER.

is basted firmly along the edge of the article. The cloth will afford more room by which to hold the piece while working. A piece of linen which has been stamped too near the edge of the material to handle conveniently, can be managed in the same way.

A SHIRT WAIST BAND.

A good way to finish the band of a shirt waist is to stitch it around the waist underdeath across the back and sides up to the gathers in the front and have pieces of tape sewed on here on the right side to tie. The fullness can easily be adjusted and the waist is also held down perfectly. This makes the task of ironing much easier than if the band were stitched all around.

HANGING SKIRTS.

Perhaps the most frequent and readily seen defect in an ill-made gown, is the uneven length of the skirt. To get the proper and even length is often a dreaded task. A long street skirt is very undesirable, not only that it is unsanitary, but very inconvenient and unbecoming. The proper length depends on the form and age of the person. Two to four inches from the floor is the most common measure used. The skirt other than for small girls should always be measured from the floor since the side, back and front often vary.

An easy method for hanging a skirt is for the person for whom the skirt is hung to stand on a table and hold a yard stick parallel to the body with one end on the table. The person who is hanging the skirt can then measure off from the yard stick as many inches from the floor as desired, moving the stick every few inches. The hem can be turned up at once by means of pins or pins may be placed in the skirt the desired distance up. In this way a skirt may be hung very easily in a very short time.

Another method which has proved very satisfactoy when one must do her own skirt hanging, is to hold a yard stick parallel to the body with one end on the floor marking off the skirt with pins or pointed crayon at the top of the yard stick the distance from the floor. Then measure down from the pin or crayon line the length from the skirt band to the floor minus the length from the skirt band to the crayon or pin line and the number of inches from the floor. Since the distance from the waist-line to the pin line varies, it should be measured every few inches. The skirt band should be on in every case before hanging the skirt.

ATTACHING WAIST AND SKIRT.

Possibly no one thing aids in putting on and wearing a skirt and waist so much as having them attached with hooks and eyes or better hooks and very small brass rings. The rings and hooks should both be buttonhole stitched on. Place one of the three small rings one and one-half to two inches to the right of the centre of the waist line in the back, one of the rings in the centre and the other one and one-half to two inches to the left of the centre. Button-hole stitch number three hooks on the skirt band in corresponding positions.

To avoid inconvenience use the same spacing in all waists and skirts. The reason for putting the small rings on the waist is that the eyes are more apt to pull off and are more easy to fasten. No waist or skirt should be considered complete until the attachment of the two is made sure by the hooks and rings.

Announcement

The American custom of "coffee for breakfast" is gaining quite a foothold in Canada, with the result that there is a largely increasing demand for a coffee of really good quality.

In order to meet this demand I decided some time ago to put up a coffee the quality of which would be fully equal to the best that we are accustomed to get when we visit the United States.

It has taken a full year to make preparations, to secure and install the most improved machinery, to decide, after innumerable tests, on the exact standard of coffee which would be most pleasing in flavor, strength and fragrance, and to select and import the high-grade coffee required. This has all been done, and the coffee is now being sold under our brand, "Estabrooks' Red Rose Coffee."

Not only is the coffee of a very fine quality, but we have been fortunate in finding a new and greatly improved process of mauufacture; crushing instead of grinding, a process which removes the chaff or skin of the bean and breaks the kernel into small, even grains. This is described on the label of the tin, and will be described more fully in later advertisements.

You know the success that has attended "Red Rose Tea," a success due entirely to the superior quality of the tea and good business methods. Every guarantee made on behalf of "Red Rose Tea" will apply to "Red Rose Coffee." It will always be just as represented.

Our travellers are just starting out, and it will be about two months before they can visit all the merchants in the Maritime Provinces. By the end of that time we expect to have the coffee in practically every store that sells Red Rose Tea. In the meantime, if you will write and give me the name of the merchant you deal with, I will see that you can get a tin at once.

It is put up only in one grade and only in sealed tins; 1 lb. and ½ lb. 40c. per lb.

T. H. Estabrooks

Branches: Toronto, Winnipeg. St. John, N.B. 2

ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges. The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

Address—**MARITIME FARMER, Sussex, N. B.**

DIP YOUR SHEEP

Stockmen and farmers who use the Cooper Dips have healthier animals—get more wool and better prices. More than half the cloth and flannel of the world is made of Cooper dipped wool. Tanks supplied at cost to all users of the Cooper Dips.

COOPER'S POWDER DIP

The leading sheep dip for 65 years. Used on 250 million sheep every year. Kills ticks, lice, nits and eggs in one dipping. Does not stain the wool, but increases the yield and improves the quality.

Prices 25 gal. pkt. 50c., 100 gal. pkt. $2.00.

COOPER'S FLUID DIP

for all animals. A highly concentrated, non-poisonous fluid dip of marvellous strength. Mixes readily with cold water, whether hard, brackish, or salty. The only pure liquid dip—no sediment. Goes farther than Coal Tar dips and, therefore, cheaper. Positive remedy for scab, mange, ticks, lice, ringworm, eczema, sores, bites, stings, etc. One gallon makes 200 gallons for general dipping, or 300 gallons for disinfecting.

Price—Qt. can 75c. 1 gal. can $2.00, 5 gal. can $8.50.

COOPER'S WORM TABLETS

A sure remedy for intestinal worms in Horses, Sheep, Cattle and Dogs. These tablets offer the great advantage of correct doses and certain results. Dose—one tablet for lamb or shoat, two for sheep or hogs, three for horses and cattle.

Price—10 tablets 20c. postpaid, box of tablets, 200, $1.00, postpaid.

COOPER'S "LAVENE"

The most effective skin dressing for Horses, Cattle and Dogs. Cures worst cases of Mange and Ringworm at one dressing. Searches the skin and attacks the disease at its root. Improves the coat and renders hair soft and glossy. Is used by many of the best breeders in preparing animals for show.

Price Qt. can $1.00, Gal. can $3.00. CANADIAN DRUG CO., LTD., ST. JOHN, N. B.

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

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Cuts 4 sides at once---No crushing or bruising. Little pain. The only humane method. Write for free booklet. R. H. McKENNA

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Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application. TELEPHONE 1005

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

We are under deep obligations to our graduates, who, by their ability and proficiency, have commended our work to the public.

Our aim is to continue turning out graduates of this class. They have always been our best advertisement.

Free catalogues to any address.

THE ST. JOHN Business COLLEGE

S. Kerr, Principal.

Maritime Stock Breeders Convene.

The annual meeting of the Maritime Stock Breeders' Association was held in the D. J. T. A. Hall, Truro, N. S., on Wednesday, January 12th at 2.30 p. m.

President E. B. Elderkin was in the chair and the other members present were: F. L. Fuller, M. McF. Hall, Col. H. Montgomery Campbell, Roy Pipes, S. J. Moore, Hon. D. V. Landry, Robert Robertson, A. Snowball, W. W. Black, S. A. Logan, R. S. Starr, Guy Fuller, Oliver Saunders, W. C. MacLeod, Peter Brodie, C. A. Archibald, Col. Blair, Bliss Fawcett, John Retson, Richard Creed and M. A. MacLeod.

President Elderkin gave an interesting resume of last year's work, including an account of the very successful Winter Fair which was held in December and the bright prospects for the future.

Minutes of all regular and special meetings, held during the year, were read by Secretary Fuller and unanimously approved.

The financial statement and auditor's report showed a cash bank balance of $312.49, with all the Association's bills paid up to date.

The question of the advisability of holding a Horse Show in the spring of 1910 was discussed and on motion it was decided to leave the matter in the hands of the executive, who will go forward with the movement, providing they see their way clear re financial and general public interests.

Hon. Dr. Landry, M. P. P. for Kent County, N. B., and Commissioner of Agriculture for New Brunswick, delivered an address, expressing appreciation of the work done by the Maritime Stock Breeders' Association and giving words of encouragement for future operations.

The election of officers resulted as follows:

President—Col. H. Montgomery Campbell, Apohaqui, N. B.

Secretary-Treasurer—F. L. Fuller, Truro, N. S.

Directors for Prince Edward Island—Hon. John Richards, Bideford; Walter M. Lea, Victoria; James Roper, Charlottetown, and Gavin Harding, Graham's Road.

Directors for Nova Scotia—W. W. Black, Amherst; R. S. Starr, Port Williams; C. A. Archibald, Truro, and S. A. Logan, Amherst Point.

Directors for New Brunswick—Col. H. Montgomery Campbell; M. H. Parlee, Lower Millstream; Bliss Fawcett, Sackville, and R. A. Snowball, Chatham.

After a hearty vote of thanks, moved by Col. Campbell, seconded by R. S. Starr, for appreciation of Secretary Fuller's untiring efforts in behalf of the Association, which was unanimously carried and to which Mr. Fuller replied in a few well chosen words, the meeting adjourned to meet again in the College Hall at 7 p. m., where the question of sheep raising was thoroughly discussed by Professor Cumming, Andrew McPherson and others.

At a subsequent meeting of the executive, F. L. Fuller, R. A. Snowball, Hon. John Richards, R. S. Starr and W. W. Black were appointed a committee for the purpose of carrying on the work of organizing the prosoed horse show.

Milkless Cow.

I have a heifer that came in last spring and did not give any milk and has not given any.

R. B.

Ans. Special feeding will not avail if the use of ordinary farm feeds and bran do not bring on a flow of milk. Persistant hand rubbing of the udder and an application of brandy or alcohol at the last rubbing may stimulate milk flow at calving time, provided there is nothing radically wrong. It may be, however, that the milk producing function is dormant in this heifer, or the glands lacking in development and circulation.

The Empire

PROVES ITS CLAIMS

Claims are **words**—Proofs are **Facts.**

Mere claims have often sold goods. Proofs are a record of dollars made—You, or anyone else, don't want the Cream Separator that **Claims** the most—you want dollars from your handling of milk. Therefore, you want the **proved** separator—the dollar-making.

FRICTIONLESS

Empire CREAM SEPARATOR

Here are some **facts** that will interest you—The Empire turns the most easily—is practically frictionless—is most easily washed—a few simple parts without a cranny or crevice in them—gets all the cream, and the highest quality of cream at that—is durable—will not get out of order—will cost you practically nothing for repair. These facts spell dollars for you if you give them the opportunity.

Send for our new Catalogue—it costs you nothing, but will show you how you can make **dollars.**

EMPIRE CREAM SEPARTOR CO.,

Sussex, N. B. - - Box 31

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A Real Lung Tonic

Rev. Father Morriscy

There are many preparations that will *relieve* a cough—few that will *cure* it. The first class, containing such drugs as Opium and Morphine, simply deaden the irritation and stop the cough, but do little or no permanent good.

"Father Morriscy's No. 10"

does not contain a trace of these dangerous drugs, but is an absolutely safe and scientific preparation of Nature's own remedies—Herbs, Roots and Balsams.

It entirely removes the irritation that caused the cough, by cleaning out the mucus, stopping the inflammation and healing the delicate membrane of throat and lungs.

Moreover, it tones up and strengthens the whole system, particularly the lungs, and protects against future coughs and colds.

Trial size 25c. per bottle. Regular size 50c.

At your dealer's. 23

Father Morriscy Medicine Co. Ltd. - Chatham, N.B.

Constipation is the root of many forms of sickness and of an endless amount of human misery.

Dr. Morse's Indian Root Pills,

thoroughly tested by over fifty years of use, have been proved a safe and certain cure for constipation and all kindred troubles. Try them.

25c. a box.

A Woman Who Sees This Washer

will want it right away. The "Puritan" takes all the work out of wash day—in fact, it does away with wash-day because a big family wash can be done in an hour. Improved roller gear and other exclusive features mean quick, easy washing.

Churning made easy with the "Favorite" Churn—a national favorite.

If your dealer does not handle these two labor-saving devices, write us. 68

DAVID MAXWELL & SONS, - ST. MARY'S, Ont.

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The largest dealers in Furs and Skins in the world.

We pay the HIGHEST MARKET PRICE

for all kinds of

Raw Furs and Skins

Honest assortment. Quick returns

Ask for our 1909-1910 PRICE LIST; IT'S FREE

OFFICE AND STOREROOMS:
134 and 136 McGill St. Montreal.

WE PAY EXPRESS CHARGES.

Cattle and Sheep Labels.
The greatest thing for stock. Now is the time to get posted. Write to-day for free sample and circular.
F. G. JAMES, Bowmanville, Ont.

The Poultry Industry in Canada

Taking practical and unexaggerated figures the average hen produces only one hundred eggs per year, taking her product as 100 eggs worth $1.00, 8 chickens at 10c, her body worth 25c less cost of feed etc, say $1,00, how much greater will be the profit derived if the hen lays half as many eggs again (and 150 eggs is quite a reasonable demand from a hen, under favorable circumstances); the increase will be clear profit.

What are favorable circumstances?

Proper housing and ventilation, cleanliness, varied and unstinted rations, and care and selection of stock, breeding only from the best layers, either using trap nests or some such convenient measures for ensuing the latter. Such point mentioned, must receive equal attention. The best hen can't lay well in a dirty, damp, poorly ventilated house. Receiving the best of care in feeding a hen may lay under such conditions, but she can't do her best, a great deal of the food that should be making eggs has got to go to keeping up her constitutional vitality and health. Neither can the best hen be reasonably expected to lay in the finest built and most modernly ventilated house, if she be fed only sufficient to keep her alive, or what will produce fat, or muscle or bone only, she must have a variety to keep her health, the surplus goes into the egg, and so, equally unreasonable would it be to expect hens to lay, no matter how well housed and fed they be, if they are not layers. There are such hens. As in everything else there are drones in the poultry world; as Pat says, "hens that are no good for nothing." This is avoided by breeding from layers only.

Taking up another side of the question, Prof. Gilbert put the two great questions, "Why do we not get more strickly new laid eggs on the market?" and "Why do farmers not take a greater interest in poultry?" The only answer that can be attributed to the second is that "the farmers are too well off." Some say "There's nothing in it." How do they know? How many farmers keep a strict account of what department of his farm is paying him and what is not? How long could a merchant carry on business on these lines? No, the merchant can tell at once just how much profit he is deriving from this department and how much from that. How many farmers can do this? and yet they will tell you there is nothing in a branch that has been proven time and again to be the most paying branch there is, the poultry branch. Most likely he depends on the authority of someone else who had a friend who knew a man who had a dozen hens and starved them to death, and then set forth the cry, "oh there's nothing in it?" Everybody can't succeed; nothing of any value can be had without work and perseverance. Some will fail; but, does the news that so and so has failed in business, drive all other merchants out of business?

A farmer does not begrudge summering two or three colts and selling at a loss of twenty to thirty dollars, yet he won't give the poor little hen half a show.

Follow up the first question as to why strictly new laid eggs are so hard to obtain, the learned Professor said. "Eggs today, in the Montreal markets are worth, wholesale, 60c to 70c for strictly new laid eggs. To be fresh, that is strictly and absolutely fresh, with the flavour of fresh eggs, they can't reach the consumer too soon after they are laid, they should not be fertilized. Take the fertilized eggs. The eggs first laid in the nest may have been covered by different hens in the course of laying, several hours during the day, and possibly through neglect left in the nest to the same treatment the second day. In eight hours the germ will start to develop, the egg is placed away in a cupboard, there to remain until a sufficient number warrants a trip to market All this time especially in the warm months of summer, the little germ is growing. At this stage every jar the egg receives causes deterioration, so

RENNIE'S

The Leading Canadian Seed Catalog for 1910

It tells the plain truth about the Best Seeds that can be grown and should be consulted by everyone, who plants seeds, whether for pleasure or profit.

We are pleased to mail it **FREE to every one** who has a garden and can appreciate QUALITY IN SEEDS. Shall we mail YOU a copy ? If so, kindly name this paper and **write TO-DAY !**

Wm. Rennie Co., Ltd., 190 McGill St., MONTREAL.

New Settlers

are coming to Canada through the Salvation Army Immigration Department

For

the purpose of supplying the demand for Farm Laborers, Teamsters, Quarrymen, and Laborers on Railway Construction, in

The Maritime Provinces

during the next few months. Farmers and others, who will need help, should apply at once to

STAFF-CAPT. A. JENNINGS,
Box 477, HALIFAX, N. S.,
or 259 Prince William Street, ST. JOHN, N. B.

Handsome Premium

A pair of these Handsome and durable **Lace Curtains**, 3 yards long by 42 inches wide, together with a new or renewal subscription to the MARITIME FARMER, post paid, for **$1.40** or for **Two New Subscribers** at 80 cents per year.

The Maritime Farmer,
SUSSEX, - N. B.

Do you want anything in the Holstein or Shropshire line ? We can supply you. We also have a pair of Clydesdale foals for sale. See our ad. elsewhere.
LOGAN BROS., Amherst Pt., N. S.

that it is not hard to conclude the condition of the egg when it reaches the consumer. The remedy for this, said Prof. Gilbert, is marketing only unfertilized eggs. "Oh", but you say, "how about hatching?" Keep your breeders by themselves. Have a few of your most select specimens, the best layers of course, birds true to type and color and breed from them alone. This may incur a little extra trouble, but is it not the persevering merchant who succeeds?"

Again the feed the hen receives controls largely the flavor of the egg. No deteriorated animal or vegetable matter should be fed. The bird should not be allowed to scratch over the dung hill, as is so frequently done.

Having taken all precautions as to the freshness and flavour of the egg, the next point is to put it on the market in an attractive manner. Already some localities find that they can only sell strictly guaranteed eggs—and it will come yet when every egg marketed will have to be guaranteed full value, if they are to be sold at all. To-day, eggs sold in this manner command a price fifteen to twenty-five cents in excess of the regular price. The Professor cited different cases in actual experience that bore him out in this statement. It was no mere theory but backed up by hard plain facts. Get the article,—get the superior article—and then you can get the price. This is an age when the demand for pure food is rampart, and it will be had, even if at an advance in cost. The difference in cost is deducted from the doctors' bills every time.

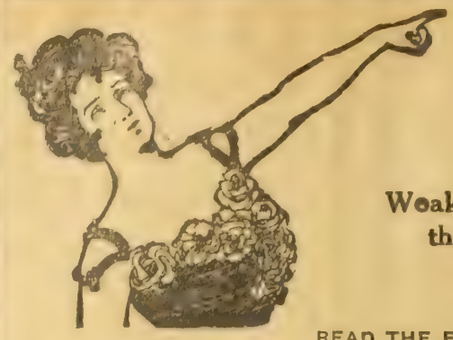
On being asked by Mr. Foster, if there was any way in which P. E. Island farmers could reach the markets paying 50c a dozen for eggs, Prof. Gilbert said, "Yes". "If the eggs can be positively guaranteed absolutely fresh." He mentioned the "Poultry Producers' Protective Association of Eastern Canada," as being a body recently formed, who would handly only such eggs. He stated that he would bring the matter to the notice of the secretary of that association, and suggested that a branch might be formed in P. E. Island. He thought it a good matter for the P. E. Island Poultry Association to take up.

Asked the best breed for the farmers to keep—any of the dual purpose fowls such as Rocks, Wyandotte, Orpingtons, or Reds, were suggested by him. By dual purposes is meant, birds that will produce two sources of profit, eggs and meat. He would not consider it profitable from the farmers standpoint, to separate the two qualities. By carful trap-nesting and selection, the heavy breeds can be bred to lay as well as any of the Mediterranean family, at the same time having a good table bird.

How many birds should the farmer keep? No more than can be given the proper amount of attention without neglecting any of the farm work.

As to the care and feed of chickens, the first part or middle of May is sufficiently early to hatch—arrange to have the chickens grow with the grass. Care should not only be taken in feeding the chicks, but also the brood hen, before the eggs hatch. The last days, (the 19th, 20th day of incubation) the hen must be fed on the nest.—During the first day and a half of the chicks' life, no food should be given, this allows the digestive organs of the little chicks to adjust themselves and become stronger, the unabsorbed yoke of the egg sustaining life during this period. The first meals should be of dry stale bread crumbs. Later this may be soaked in milk, squeezed dry and fed. About the fourth day boiled rice may be added. Positively no whole wheat should be fed till after at least the twelfth day the little chicks can't digest it. The first six weeks is the critical period in the chicks life.

By steadily increasing the rations till



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Weak Men in Every County and Town Throughout the Broad Dominion Restored to Robust Manhood by the Use of Dr. McLaughlin's Electric Belt.

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J. C. Jamison, of Elmside, Que., says: "I have not had a touch of Rheumatism after one week's use of your Belt. I am completely cured."

D. Jannison, Steelton, Ont., writes: "I have been cured of weakness and varicocele and feel like a different man; would not be without your Belt for any money."

C. H. McKague, Roland, Man., has this to say: "After ten days' use of your Belt the losses have stopped, my stomach is digesting its food, and the constipation is a thing of the past. You have my sincere thanks."

Men with small, flabby muscles, thin-chested, dull-eyed, short of breath, without endurance, courage, ambition, sand or grit in their make-up, are WEAK MEN. If they were not born weak, I can make physical giants of them.

I am not performing miracles. I have only discovered that what makes all this strength, this steam, this FORCE in a man is his Animal Electricity. That is what makes muscles and heart strong. When I find a man who has lost that power and feels only half a man, I want to give it back to him, and I can do it, for I have done it for thousands.

There are men in every town in this country now who thank me for making them feel once more like the greatest of God's creatures—MAN.

HERE IS MORE PROOF OF MY CLAIMS.

J. Largess, Box 53, Vankleek Hill, Ont., reports: "The lameness in my back is all gone, the varicocele is better, and I am getting better health generally, and have gained a good deal in weight."

Jas. Hatt, Beach Hill, N.S., says "The pains in my back and chest are all gone, and I have gained fifteen pounds in weight. It is a pleasure to say that I have at last found a remedy that will cure me of my aches and pains."

Belonie Gaudet, Miscouchie, P.E.I., writes: "I am delighted with the success of your Belt. In forty days' use I have only had three losses. My health is greatly improved, and I feel refreshed after a night's rest."

Where there is any physical constitution to work on, my treatment will develop perfect manhood. It will take the slightest spark of manly vigor and fan it into a flame which will encompass the whole structure and charge every nerve and muscle in the body with the vigor of youth.

EVIDENCE THAT CANNOT BE DENIED.

J. Sweeney, care of Seamen's Inst., St. John, N.B., has this to say: "The pains in my back have gone, and the Varicocele has disappeared, and it has done me much good otherwise. I will always recommend it."

Jas. S. Bryson, Maple Creek, Assa., expresses his gratitude by saying: "Your Belt has done me a world of good. I would not be without it if it cost me double the price which you ask."

W. H. Eaton, 512 Cordova St. E., Vancouver, B.C., is thankful because after four days' use of his Belt he was cured of a very severe case of Rheumatism, and has not had a pain since.

Richard Brill, Revelstoke, B.C., says after a month's use of the Belt he is better and healthier than he has been for years and recommends it to all weak men.

My Belt Cures To Stay Cured Nervous, Weakness, Pains in the Back and Limbs, Rheumatism, Kidney and Stomach Troubles, Varicocele, Loss of Strength and all the effects of wasted force in Men and Women.

NOT A CENT UNTIL CURED.

That is my offer. You take my latest improved appliance and use it in my way for three months, and if it does not cure you need not pay me. My only condition is that you secure me, so that I will get my money when you are cured.

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are swinging Stanchions. See the comfort and freedom they give to cattle. Are strongly made to stand the roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle because the latch is easily operated and absolutely secure.

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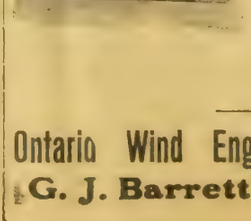

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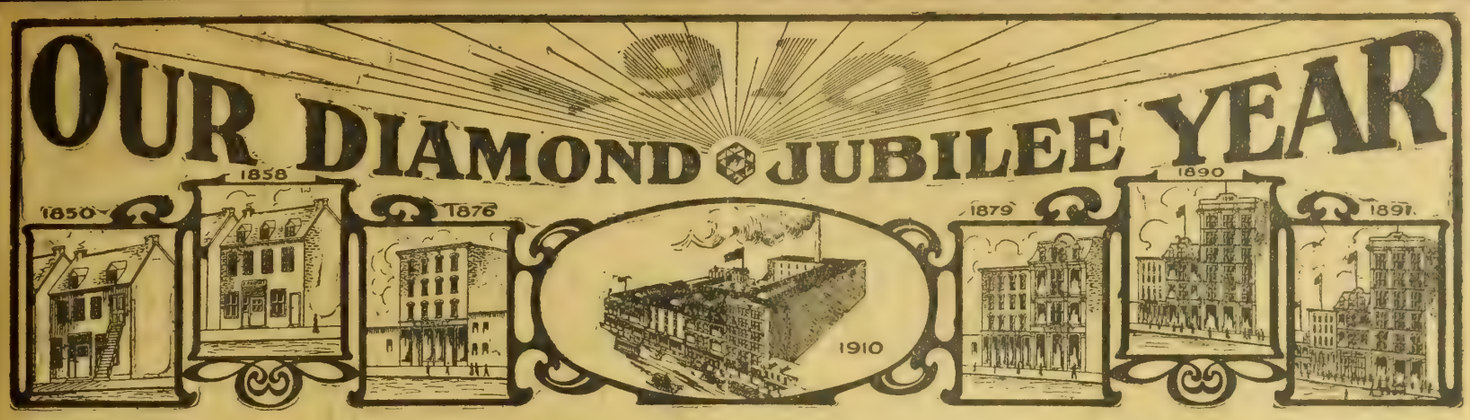

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JUST SIXTY YEARS ago this house was established by the late Mr. Z. Paquet, whose name is now a household word in every home in Eastern Canada. For sixty years we have continued to develop and prosper to such a degree that to-day we can offer you greater advantages in buying than you can secure anywhere else in this country. WE PREPAY transportation on all orders amounting to ONE CENT or over, with very few exceptions. See our great FREE DELIVERY OFFER—the broadest and most generous offer ever made in Canada. The following goods will be delivered PREPAID at the prices mentioned :—

No. 1-J—Corset Cover, in good quality cotton, open front, with six rows of lace insertion, front, neck and sleeves trimmed with dainty lace edging. Sizes 32 to 42.....19c

No. 2-J—Corset Cover, in fine quality cotton, yoke trimmed with dainty clusters of tucks and embroidery insertion, neck and armholes with embroidery. Sizes 32 to 42...27c

No. 5-J—Chemise, good quality cotton, yoke hemstitched and trimmed with fine tucks. Sizes 34 to 40.....35c

No. 6-J—Chemise, fine quality cambric, front made with tucks and lace insertion. Sizes 34 to 40.....44c

No. 7-J—Underskirt, very good quality cotton, has deep flounce with clusters of tucks and embroidery ruffles. Sizes 38, 40 and 42.....69c

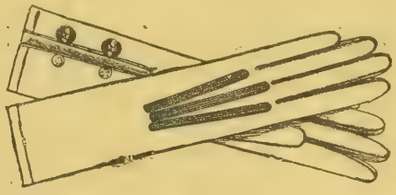
No. 9-J—Underskirt, very fine quality cotton, made with very deep lawn flounce, lace insertions and lace edging. Sizes 38 and 40.....98c

No. 11-J—Nightgown, good quality cotton, open front, yoke trimmed with clusters of tucks and hemstitched ruffle of same on neck and sleeves; 54 inches long.....59c

No. 12-J—Nightgown, fine quality cotton, open front, yoke of clusters of tucks and embroidery, neck trimmed with embroidery; 56, 58 and 60 inches long.....69c

No. 16-J—Drawers, fine quality cotton, tucked and hemstitched flounces of self on bottom; sizes 23, 25 and 27 inches.....22c

No. 17-J—Drawers, fine quality cotton, flounces with two hemstitched tucks and embroidery; sizes 23, 25 and 27 inches.....33c



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Our January Sale Catalogue contains all the above extraordinary values and many others equally attractive. Write for a copy TO-DAY. Simply send us a postcard. Say "send catalogue." You'll get it by return mail. All orders shipped the same day as received—and REMEMBER—we PREPAY ALL transportation charges, on most goods, whether your order amounts to one cent or many dollars.

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Special Ladies' Gloves

No. 110-J—Ladies' genuine French Kid Gloves, extra special quality, your choice of light, dark or medium shades of tan, two dome fasteners, every pair guaranteed. If you don't say this is the best value you ever saw, and worth every cent of $1.00, return them at once and we will refund your money immediately, January Sale Price, PREPAID.....79c

the bird is fed unstintingly of a varied ration of fleshing foods, a weight of three pounds can be and has been, time and again, produced at three months.

Asked as to double mating the professor said he did not favor the idea. Breed from birds of as even Barring as possible.

Prof. Gilbert thanked his audience for the good attention they had given him.

On being asked to say a few words, H. E. Miller Secretary of the Poultry Association stated the disappointment felt by the management of the show just past that it was not better patronized by the farmers in whose interest the shows were being held. If possible another show will be held in the fall of 1910, and if it does not warrant the association continuing the shows can only be abandoned. Touching lightly on the conditions on the Island, one of the first points to be remedied is the housing of our birds—neither the house that is in every sense of the word, "an open air house" open on four sides, nor the horatically sealed house is the proper style; the birds are better in the trees than in either of these styles. As to the improvement possible in the number of eggs produced, even a greater percentage of improvement is possible than mentioned by Prof. Gilbert, as, while the learned Professor set his figures at what he thought a very low mark, 100 eggs per hen per year the last P. E. Island Government census showed that our hens averaged only 80 eggs per hen per year—this easily allowing the production to be doubled without going beyond the average of other places.

Extracts from an address on poultry keeping before the Marshfield P. E. I., Farmers Institute, by A. G. Gilbert, poultry manager at the Ottawa Experimental Farm.

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PURE WOOL HEWSON AMHERST FABRICS
Hewson's Pure Wool Tweeds

The Westmorland Poultry Show.

The second annual show of the Westmorland Poultry and Pet Stock Association was held in the old opera house, Moncton, N. B., on January 13th, 14th, and 15th.

Mr. George Robertson, of Ottawa, placed the awards and the large number of entries kept him busy for some time. He did his work carefully and well.

Mr. J. V. Jackson presided at the formal opening and several prominent gentlemen took an active part in enlogizing the work of the Association and the revenue producing powers of our feathered friends. Over fifty exhibits of almost as many varieties, totalling 854 birds, took part in the battle for supremacy in their respective lines. The showing throughout was excellent and many very fine specimens were on hand to uphold and demonstrate the merits of their respective breeds.

Upwards of 120 birds were shown in each of the Barred Rock and White Wyandotte classes.

Following is a list of the awards.

Note—c, cock; h, hen; r, cockerel; p. pullett,

Barred Plymouth Rocks, Glen View Poultry yards, 1, 2 and 3 c; 1 and 3 h; 3 and 4 r; 3 and 5 p.

Samuel Steeves, 2 h; 5 r; 1, p.

Jos, Crockett, 1 r; 4 p.

C. P. Osborne, 2r.

W. F. Wilson, 2 p.

White Plymouth Rocks, H. T. Calkins, 2 r; 1 and 2 p.

Watson Lutz, 1 r; 3 p.

Buff Plymouth Rocks, C. R. McLaren, 1 and 2r; 1 and 2 p.

White Wyandottes, Glen View Farm [Poultry yards, 1 and 2 c; 4 h; 2 r.

R. P. R. Fraser, 3 c; 3, 4 and 5 r; 3 p.

George H. Seaman, 1 r.

A. A. Tuttle, 1 and 3 h; 1 and 5 p.

Mrs. Wm. Duncan, 2 h.

Watson Lutz, 4 p.

J. W. Y. Smith, 2 p.

Buff Wyandottes, Glen View Poultry yards, 1 c; 1, 2 and 3h; 1 r; 3 p. Alex. Donald, 2 r; 1 and 2 p.

Silver Wyandottes, R. A. Knight, 1 c; 1, 2 and 3 h; 1 and 2 r, F. J. O'Rouke, 3 r; 3 p, S. F. McKie, 2 r; 1 and 2 p.

Golden Wyandottes, Geo. H. Seaman, 1 c; 1 and 2 h; 3 r; 2 p. Ernest Bowser, 1 r; 1 and 3 p. F. J. O'Rouke, 2 r.

Partridge Wyandottes, G. Bryenton, 1 and 2 h. R. A. Knight, 1 and 2 r.

S. C. Rhode Island Reds, Glen View Poultry yards, 1 c; 1 and 2 h; 1 and 2 r; 1 and 3 p, Hartlet Steeves, 3 r; 2 p.

Buff Orpingtons, Watson Lutz, 1 c; 1 h; 1 r; 1 and 2 p, N. J. Gauvin, 2 and 3 h, G. Bryenton, 3 r; C. S. Woodling 3 p.

Black Orpington, J. W. Humphrey, 1c; 1 h, G. Bryenton, 1 r.

Dorkings, C. H. Webb, 1 and 3 p.

Red Caps, R. Swetman, 1, 2 and 3 r; 1, 2 and 3p.

Light Brahmas, C. S. Woodling, 1 c; 3 h. O. James, 1 and 2 h; 2 r. M. Day, 1 r; 3 p, M. J. Gauvin, 3 r; 1 and 2 p.

Buff Cochins, Wm. Balser, 1 c, 1 h; 1 r; 1 p, N. J. Gauvin, 2 r.

Partridge Cochins, Fred. Steeves, 1 and 2 r; 1 and 2 p,

Black Langshans; Alex. Donald, 1, 2 and 3 r; 1 and 2 p.

Houdans, Michael Day, 1 c; 1 and 2 h; 1 and 2 p. A. A. Tuttle, 2 r; 3 p. Alex. Donald, 1 r.

S. C. Brown Leghorns, Glen View Poultry yards, 1 c; 1, 2 and 3 h; 2 r; 1, 2 and 3 p. R. R. Stewart, 1 r.

R. C. Brown Leghorns, J. V. Jackson, 1 and 2 h; 3 r; 2 p. John Stewart, 1 and 2 r; 1 and 3 p,

S. C. White Leghorns, A. A. Tuttle, 1 c; 1, 2, 3 and 4 h; 2 r; 3 p. O. James 2 c; 1 and 4 r; 1, 2 and 4 p. D. D. Leger, 3 c, Michael Day, 3 r.

S. C. Buff Leghorns, Jas. McDermott, 3 c, 1 h, N. J. Gauvin, 2 c; 2 h, J. V. Jackson, 1c; 1 and 2 h, 1, 2 and 3 r; 1, 2 and 3 p.

R. C. Buff Leghorns, J. V. Jackson, 1 c; 1 and 2 h; 1, 2 and 3 r; 1, and 3 p,

Black Minorcas, R. R. Stewart, 1 c; 2 and 3 h; 1 r; 3 p. A. A. Donald, 1 h; 2 p. C. F. Norton, 2 and 3 r, Mrs. Wm. Duncan, 1 p.

Black Spanish, James Dermott, 1 c, 1 h.

Andalusians, Fred. Steeves, 1 and 2 h; 1 r; 1 and 2 p.

Polands. A. A. Tuttle, 1 and 2 r; 1 and 2 p.

Old English Games, Bismark McDougall, 1 c; 1 r; 1 and 2 p.

Black Javas, Mrs. Wm. Duncan, 1 r; 1 and 2 p.

Buff Cochin Bantams, Mrs. J. V. Jackson, 1 c; 1 and 2 h; 1 and 2 r; 1 and 3 p. Randolph Jones, 2 p; 3 r.

Black Cochin Bantams, Mrs. J. V. Jackson; 1 and 2 c; 1 and 2 h; 1 and 3 r; 1, 2 and 3 p. G.H Seaman, 1 r.

R. C. White Bantams, Mrs. J. V. Jackson, 1 c; 1 and 2 h. George H. Seaman, 1 r; 2 p.

Bantams, A. O. V., Mrs. J. V Jackson, 1 h; 1 r, N. J. Gauvin, 2 c; 2 h, Michael Day, 3 c. Jas. McDermott, 3 h.

Bronze Turkeys under 1 year, C. L. R. Weldon 1 c; 1 and 2 h.

TolouseGeese, over one year, J. W. Humphrey, 1 gander; 1 goose. N. J. Gauvin, 2 gander. C. S. Woodling, 2 goose.

Embden geese, under 1 year, G. Bryenton, 1 gander; 1 goose.

Geese, A. O. V., G. Bryenton, 1 gander, 1 goose.

Pekin Ducks, over 1 year, J. V. Jackson; 1 and 3 drake; 1 and 2 duck, J. W. Humphrey, 2 drake; 3 duck.

Pekin Ducks, under 1 year, Hartley Steeves, 1 drake; 1 duck. A. A. Tuttle, 2 drake. J. V. Jackson, 3 duck. F. P. McFarlane, 2 drake, Wm. Balser, 3 drake.

Rouen Ducks, over 1 year, Judson Steeves; 1 drake. J. V. Jackson, 1 and 2 duck.

Rouen ducks, under 1 year, J. V. Jackson, 1 and 2 drake; 3 duck. Judson Steeves, 1 and 2 duck.

Pigeons, White Fantail, D. V. Jackson, 1 c; 1 h; 1 r; 1 p.

Pigeons, Colored Fantails, D. V. Jackson, 1c, 1 h, 1r, 1 p.

Pigeons, Homers White, C. C. Fraser, 1 and 2c; 1 and 2 h; 1 and 2r; 1 and 2 p.

Pigeons, Homers, colored, C. C. Fraser; 1 c; 1 h; 1 and 2 r; 1 and 2 p, D.V. Jackson, 2c; 2 h.

Pigeons, A. O. V., D. V. Jackson, 1 c; 1 h; 1 r; 1 p.

Wyandotte Breeding pen, A. V., 2. Glen View Poultry yards; 3, R. P. R. Fraser.

Plymouth Rock Breeding pen, A. V., 1, Glenview Poultry yards; 2 and 3, Samuel Steeves.

Leghorns Breeding pen, A. V., 1, Glenview Poultry yards; 2, O. James; 3, J. V. Jackson.

Minorcas Breeding pen, A. V., 1, W. R. Wilson.

Breeding Pen, A. O. V., 1, Mrs. J. V. Jackson; 2, Glen View Poultry yards, 3, Wm. Balser.

Ducks, Breeding pen, A. V., 1, J. V. Jackson; 2, Hartley Steeves; 3, G. Bryenton.

Collection Guinea pigs, 1, C. C. Fraser; 2, Randolph Jones.

Collection Rabbits, 1, Randolph Jones.

Angora cats, 1, M. L. Huntley.

Collection Canaries, George McAllister.

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OUR JANUARY AND FEBRUARY SALE is the greatest value-giving event in our history. Every item will interest you. Every style will please you. Every price will surprise you. Get a copy of our Catalogue at once as this Great Sale will positively end on February 28th.

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Make Your Own Stock Food.

One pound of Barnes' English Compound makes ten pounds of stock food, by mixing it with three pounds of linseed meal and six pounds of corn meal. As a conditioner and flesh producer has no equal.

Post-paid on receipt of 50c. money order or stamps. Address

S. G. AMSDEN, Winsdor, Ont.

FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N. B.

Are the diseases, so often destructive to plants in the house, caused by careless watering, etc. ?

An unhealthy condition of plants is often caused by lack of ventilation, too little or too much water, too high or too low temperature. Coal and escaping illuminating gas also must be guarded against with the greatest care. For both insects and diseases an ounce of prevention is worth a hundred weight of cure. See to it that your plants have proper soil and drainage and that watering and temperature are not neglected. Be sure that no insects are brought in from out doors on the plants and also provide for the evaporation of water near the plants, that the air may be kept sufficiently moist. Syringe the foliage on bright days and three or four times a month dip the small plants into soapy water, followed by a dip in clear water. Sponge off the large plants with the same preparation and follow with a clear syringing.

The three insects most likely to give trouble are probably familiar to all who have ever attempted to grow plants in the house. They are : The Green Aphis, Mealy Bug and Red Spider.

The Aphis, a common green plant louse, is of sufficient size to be plainly visible, but it keeps to the underside of the leaves and shoots where its presence is unsuspected and often, for a while, escapes detection. It is a sap sucker, multiplies with great rapidity and greatly injures the vitality of the plant. Unless checked at once, before many of the insects are full grown, it is difficult to eradicate. The conditions favorable to its attack are poor ventilation, partial shade and plants crowded together should be changed immediately. Use tobacco, applied in one of the following ways : Syringe the plants, (using one of the small hand syringes for sale by almost all seeds men), and then sprinkle thoroughly with tobacco dust. Some brand, made especially for this purpose, is a great deal better than the ordinary dust, which is apt to have but little strength. If possible, apply the dust with a bellows, so as to get it on evenly, particularly under the leaves, where it is most needed. If the plants are not too large, invert them while applying the powder. Allow the dust to remain on the plant for twelve or eighteen hours and then thoroughly syringe with clear water. If necessary, give the treatment again in two or three days.

The Mealy Bug is a white, cottony looking mass, easily seen. It seems to be most fond of the Colins Fuchsias and other soft wooded plants. It thrives on a hot, dry, close atmosphere and is apt to keep out of sight in a mass of leaves or in some corner until there is a great number, when they infest the undersides and stem joints of the leaves.

If there are only a few insects upon the plants when you first discern them, take a fine feather or a small, stiff brush and with this apply alcohol, kerosene or coal oil to the insects, killing them on the spot.

The Brown Tail Moth.

(Continued from page 180)

stock and to destroy any of the winter nests that were found. Over a million and a half plants were examined and nearly 200 nests were found on seedlings and stocks of pear, apple, plum, quince, cherry, rose, spiraea, etc. In view of the fact that each nest contains from 200 to 300 young larvae of this insect, the great benefit to fruit growers, horticulturists and others resulting from the work of last season can readily be understood. In the eastern states thousands of dollars are being spent annually by the various authorities in their efforts to control and prevent the spread of this insect which has established itself in those regions since its introduction into Massachusetts on imported stock about the year 1980. It is of the utmost importance that all steps possible shall be taken to prevent its introduction and establishment in those regions of Canada now free from its attack, and its further spreading in these places in Nova Scotia and New Brunswick where it has been introduced accidentally. Its establishment in Canada would be most serious to the nurserymen and fruit growers of this country, and every precaution possible must be taken to avert such a calamity.

Will you kiudly inform me, therefore, if you are importing or have already imported nursery stock this season from abroad, and the place from which the stock is being or has been imported.

As nests have been found on stock imported during the present season, I should be pleased if you would send me this information at once in order that your stock may be inspected, if necessary. If the stock has not arrived already would you please send me notice as to the time of its arrival in order that it may be inspected at the time of unpacking, and thus the least inconvenience will be caused.

It has been found that fumigation is of no avail against this insect and that destruction by burning of the winter nests is the only safe remedy.

I feel sure that all to whom this letter is addressed will be alive to the seriousness of the danger which is imminent, and will co-operate with the division and other authorities in the efforts being taken to prevent the introduction and spread of the brown-tail moth. I shall be pleased to supply further information or reply to communications on the subject and shall be grateful for any assistance which you are able to give me.—C. Gordon Hewitt, Dominion Entomologist, Ottawa.

Chamberlain's Stomach and Liver Tablets invariably bring relief to women suffering from chronic constipation, headache, biliousness, dizziness, sallowness of the skin and dyspepsia. Sold by all dealers.

They Pass the British Government's Acid Test for Galvanizing

Do you know that PRESTON Safe-Lock Shingles are the ONLY kind you can buy that are made according to British Government Specifications for Galvanized Sheet Metal?

The British Government is the most particular buyer in the world. The sheet metal it buys for public works must be made and galvanized far better than ordinary sheet metal.

Each sheet must be carefully sheared to exact dimensions, thoroughly cleaned, and afterwards galvanized with best Virgin Spelter, which must consist of not less than 98 per cent. pure zinc—Extract from British Government Specifications.

Each steel sheet is cut to the exact size of a PRESTON Shingle before it is galvanized with 98 per cent. pure zinc. In this way even the edges are thoroughly galvanized.

The sheets must be heavily and uniformly coated with zinc.—Ex. from B. G. S.

Ordinary galvanized sheets are not nearly so heavily coated with zinc as those galvanized according to British Government Specifications. To secure a thin coating the spelter is heated to a very high temperature. When the steel sheets are dipped into it only a small portion adheres to the surface.

Your eye cannot tell a thinly coated sheet from one heavily coated. That is why there are such a lot of cheap steel sheets on the market. They are considered good enough for ordinary shingles. But they couldn't pass the rigid specifications required of the steel sheets we use for PRESTON Shingles.

The steel sheets for PRESTON Safe-Lock Shingles are dipped into spelter kept at a lower and correct temperature. The sheets thus become very heavily coated. And, the coating is made perfectly smooth and even.

The sheets must stand bending without cracking the galvanizing.—Ex. from B G.S.

Unless the steel sheets for PRESTON Shingles were of perfect quality and galvanized according to British Government Specifications not only would the galvanizing crack, but the metal also, where our top lock is folded to produce three thicknesses of metal. Look at a PRESTON Safe-Lock Shingle and you'll find the steel and the galvanizing perfect at our top lock as well as everywhere else on the shingle.

THE ACID TEST

The galvanizing must be able to stand the test of dipping the sheet into a solution of sulphate of copper at a temperature of 60 degrees Fahrenheit, allowing it to remain in the solution for the space of one minute, and then withdrawing it and wiping it clean. The galvanizing must allow of this being done FOUR *times without showing signs of a reddish deposit of Copper.—Ext. from B G.S.*

The reddish deposit shows up the thinly galvanized spots. Ordinary galvanized sheets, treated to this test, would be thickly spotted with reddish deposits. Yet you are asked to pay the same prices for shingles that cannot pass this test as you are for PRESTON shingles, which will easily do so.

This Acid Test is more severe on the galvanizing than twenty years of Canadian weather. You see, sheet steel galvanized according to British Government Specifications is galvanized to last. PRESTON Shingles are good for twice the service of ordinary galvanized shingles.

The construction of PRESTON Safe-Lock Shingles is far ahead of all others.

Other shingles merely slip or slide together at the sides and are easily pulled apart. PRESTON Shingles are securely locked together at the sides on the principle of the "sailor's grip." The heavier the strain, the firmer the grip. You cannot pull them apart.

The top lock of PRESTON Shingles is TWICE as strong as our wonderfully secure side lock.

The top of the shingle is where the greatest strain falls. PRESTON Safe-Lock Shingles have a top lock consisting of three thicknesses of sheet steel, so that they can easily withstand the strain due to shrinking of sheeting or settling of building.

No other shingles can have such a top lock, because this feature is patented by us. The top lock of most shingles isn't as strong as the side lock of ours.

Lightning causes the loss of thousands of dollars each year to Canadian farmers. With every PRESTON roof you get a FREE Lightning Guarantee which secures you against this terrible destroyer.

You do not get a Free Lightning Guarantee with other shingles. Neither do you get shingles safe-locked on all four sides. Nor shingles with the nailing fully protected against the weather. Nor shingles made according to British Government Specifications. Nor shingles so easy to lay.

We have just issued a new booklet "Truth About Roofing." We should charge something for this, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us. Just you send it to-day.

METAL SHINGLE AND SIDING CO., LIMITED

Head Office, King Street Factory.
PRESTON, ONT. 2

Branch Office and Factory, Montreal, Que.

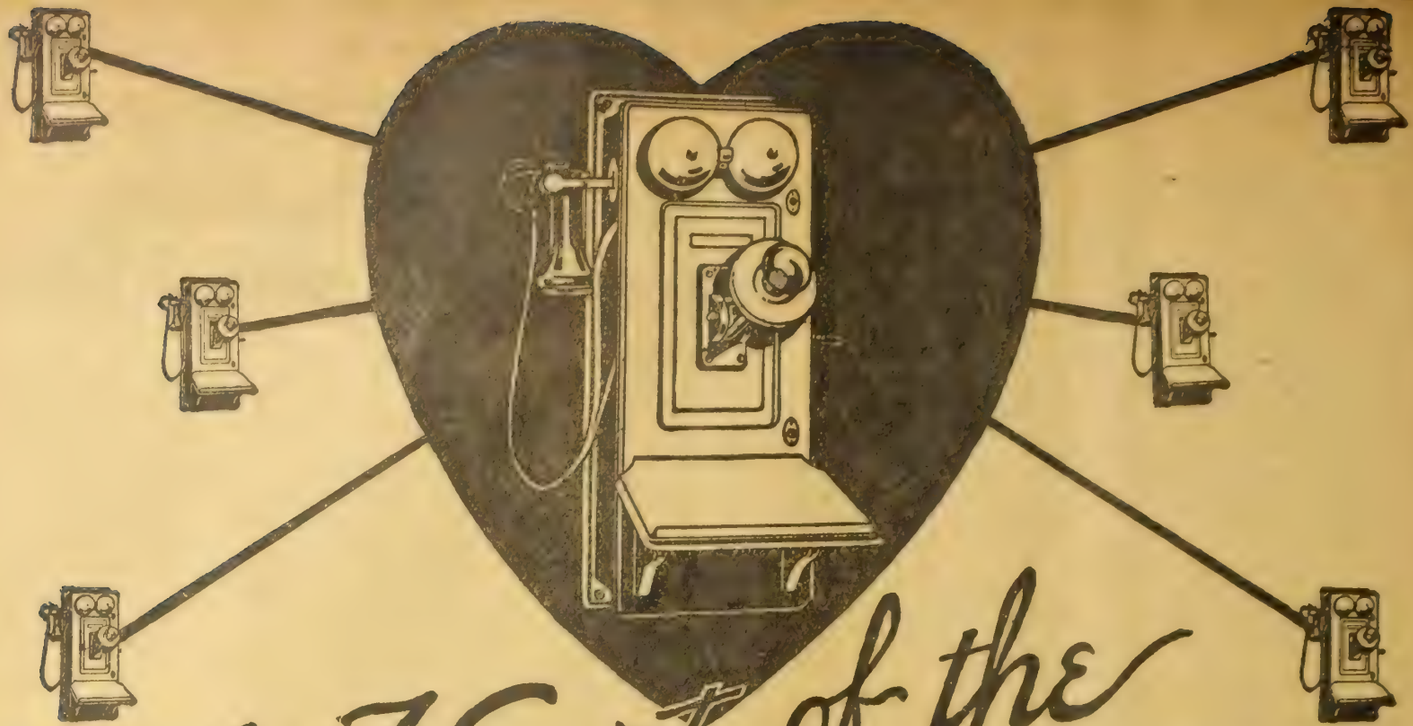
PRESTON SAFE-LOCK SHINGLES

Please send me your new booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles.

Name _____

P.O. Address _____

County _____ Prov. _____



The Heart of the Community

OUT OF 259,000 PHONES IN USE IN CANADA, 250,000 ARE MADE BY US

DON'T you think that fact almost speaks for itself? There hardly seems to be much left to say. No better evidence could be demanded—or given—of the absolute perfection of every instrument turned out by us. For a long time past we have had our best engineers at work on the problem of designing a more powerful Farmers' Line Telephone. And now we have it. The work was completed months ago, although it is only now that we are offering it to you. The interval has been devoted to "trying out" these new sets under the most exacting conditions it would be necessary to meet anytime—anywhere.

SEND FOR OUR FREE BOOK

ALL you have to do is to ask for Bulletin 2816 and we will mail you FREE, at once, the full story of farm telephones. Asking for the book places you under no obligation—don't hesitate to tell us you want it. We are anxious that you should be posted on the value and economy of farm telephones. A post card will bring it.

Watch for the other advertisements of this series. They have a story to tell you.

OUR NEWLY DESIGNED NO. 1317 TYPE TELEPHONE SET

represents the attainment of perfection in telephone construction. Go over it point by point—prove it for yourself by comparison with any other instrument you like.

Take the transmitter—into which you talk—you will find it the standard long-distance type.

Then there is the receiver—the earpiece: it is simply perfect—never will you be bothered by local noises to spoil transmission. The result of long and careful study, it is the best possible construction and combination for the purpose.

The generator has also been well worked out—so well, in fact that this generator is stronger than any other telephone generator on the market. Observe how easily it turns. It will ring more telephones on a longer line than any other 5-bar generator made today. Thousands of these generators are now operating on lines more than 30 miles long with as many as 40 telephones on the same line.

The ringers and gongs are unusually efficient. Our new type 38 ringer is not only very sensitive, but very strong and operates on from only one-third to one-fourth the current ordinarily required. The extra large brass gongs produce a volume of noise fully half as great again as gongs on other sets. You'll never fail to hear this telephone when it rings. The switch hook makes all contacts on the best grade of platinum points—that makes for efficiency.

Taken as a whole Set No. 1317 is an extremely handsome instrument. The woodwork is of quarter-sawed oak of finest quality and handsome finish. And in point of service this telephone is unsurpassed—more than $10,000 was put into it in engineering expense alone before the first instrument was made. Would you like to know more about it? The space here won't permit us to tell you, but if you will write, we'll gladly give you any information you may desire.

THE NORTHERN ELECTRIC AND MANUFACTURING CO. LIMITED

Manufacturers and suppliers of all apparatus and equipment used in the construction, operation and maintenance of Telephone and Power Plants.

201

MONTREAL	TORONTO	REGINA	VANCOUVER	WINNIPEG
Cor. Notre Dame and Guy Sts.	60 Front St. W.		918 Pender St. W.	599 Henry Ave.

The PUBLISHER'S DESK.

A TESTIMONIAL.—I am very pleased indeed to write you, that the man you sent me, is giving good satisfaction. I wrote you soon after he arrived, that I thought he was going to be rather slow, but I have found out the work for which he is adopted, and he is very faithful and trust worthy at it, the other man you sent me is also doing well. As far as I have had experience, the Salvation Army has sent out an exceptionally good class of men, and I am pleased to approve of their system, I remain, yours sincerely.

The above is one of the many testimonials, received from farmers regarding the class of men brought to this country through our agency. Farmers who will need help during the winter, or in the early spring, should write at once to STAFF, CAPT. JENNINGS, BOX, 477, Halifax, N. S.

A WELCOME ADDITION TO MARITIME INDUSTRIES — The enterprise and large business capacity of Mr, T. H. Estabrooks has given him a commanding position in the tea trade of Canada, and made St. John the principal port of entry for Indian and Ceylon Teas in the Dominion. This success is especially remarkable because it has been won within a few years. Persistent and judicious advertising has made Red Rose Tea a household word from the Atlantic to the Pacific, but the real basis of Mr Estabrooks' success has been his unwavering adherence to his conviction that quality pays, and to his straightforward and generous business methods. There is no man held in higher regard by the retail trade of Canada.

Having turned the eyes of Canada to St. John for tea, Mr. Estabrooks has decided to enter the coffee trade, and with his established reputation and his far-reaching business organization, backed by his keen business ability, success is assured.

This is not a sudden impulse however For more than a year prepartions have been under way. A plant fashioned after the most scientific and commercially approved methods has been installed and is now in operation. The coffee, instead of being ground, is now crushed between steel rollers, which turn it ont in grains of uniform size. This is the most modern and approved method of preparing coffee for use

The same day it is roasted, the coffee is crushed and put up in pound and half-pound doubly-sealed air-tight tins

Only one grade of coffee will be put on the market, and it will be a grade to appeal to particular people. With coffee, as with tea Mr. Estabrooks will adhere to the principal of quality goods.

Coffee blending, roasting and packing by new, scientific methods, and on a large scale, will be a welcome industry in the Maritime Provinces, and for this reason as well as for his own sake, the trade will wish Mr. Estabrooks unbounded success in his new venture.

The new coffee will bear the name "Estabrooks' Red Rose Coffee." The labels are very handsome, and in addition to directions for making, give a description of the new crushing process.

A TRIP TO ALASKA—A trip to Alaska is one seldom undertaken by people in the British Isles and of the many bookings undertaken by the Grand Trunk Railway officials in London, few tickets show the destination to be that part far north of Canada, where coal and gold, together with meteorological observations, are often supposed to be the chief reason for the existence of that land. That such a trip can be made with little out of the ordinary fatigue of travelling is well proved by a recent communication sent to Mr, Fred. C. Salter, European Traffic Manager of the Grand Trunk Railway, from Mr. Bromley Challenor, F.R.G.S., who has just returned from the north-western limit of the North American Continent. The letter has an added interest by reason of the fact that on the day of the official opening of the Grand Trunk Railway's new offices at 17-19 Cockspur Street, S. W., Mr. Challenor was the first person to book a passage with the Company for Canada On Dominion Day (July 1st) the trip was planed and provision made for the journey, and, in the first week in October, back in England again, the well-known geographer has been pleased to write to the Grand Trunk offices expressing his entire satisfaction with the easy way in which the journey was accomplished. After thanking the railway officials for making his means of transportation pleasant and comfortable, he says: "I was very pleased, indeed, with both the road and rolling stock of your Company, and in my opinion it is second to none on the Continent of America. The arrangements you made for me very much added to my comfort and enabled me to reach my destination in the quickest possible time, and I must say I experienced the greatest civility from the Company's staff during my passage on your road. The route you worked out for me was a most interesting one, and coming back as I did, over the Rockies and the Great Lakes, I did not travel over a single mile a second time except the short run between Sarnia and Toronto. Will you be good enough to send me particulars of your 'Round the World Tours.' I am thinking that next spring I may have another run out to the West, and if I do, I should like to return home via the East." Thus the whole of Great Britain is quickly put in touch by this great railway system, with what frequently is said to be the uttermost parts of the earth.—Dublin (Ireland) Daily Express, Oct. 19, 1904.

Are you frequently hoarse ? Do you have that annoying tickling in your throat? Does your cough annoy you at night, and do you raise muscus in the morning? Do you want relief? If so, take Chamberlain's Cough Remedy and you will be pleased. Sold by all dealers.

Throw away the old washboard!

How about that heavy family washing that has to be done each week? It seems incredible, but there are still some people who continue to use the old back-breaking washboard method, which makes common drudges of Mother, Wife and Sister (which results in irritable, nervous, over-worked women.) Our

"New Century" Washing Machine

washes a tubful of clothes in five minutes. Powerful oil tempered steel spiral springs and tool steel ball bearings make the work so easy that a child of six or eight can do it.

The new Wringer Stand is strong and rigid, and drains the water right into the tub. Ask anyone of the army of satisfied users about it, or better still try one; they will be a better argument than we can put on paper.

$9.50 complete, without wringer, delivered at any railway station in Ontario or Quebec.

Cummer-Dowswell Limited,
HAMILTON, Ont. 43 A

Canada's Best and Best Known Felts

Kimmel Felt Shoes and Slippers are for all men, women and children — young and old.

And the Kimmel trademark is on every pair.

Kimmel FELT FOOTWEAR

Styles to suit every use and every taste — each the best at the price that money can buy.

Ask your dealer for "Kimmel" Felts.

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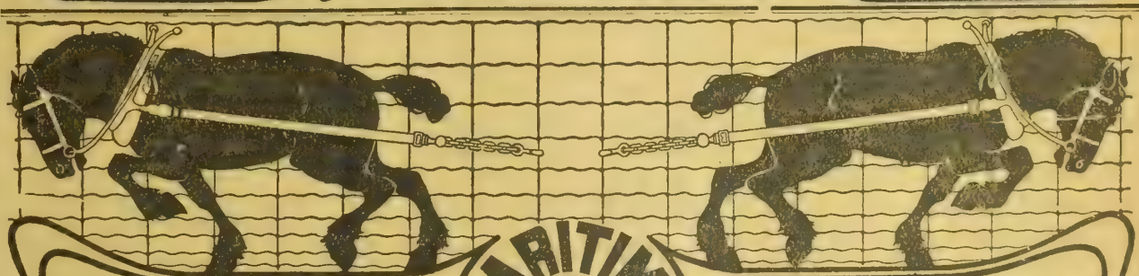


THE LOCK CAN'T SLIP

MARITIME WIRE FENCE

The illustration demonstrates the phenomenal gripping-strength of our lock. Under the most unusual strain it never gives. It is known as the lock that can't slip; the lock that unfailingly holds the wires in their correct position.

Our Free Catalogue will tell you more about our can't-slip lock, and about the superior English high-carbon, hard-drawn steel wire from which Maritime Wire Fence is made. Address the card to

New Brunswick Wire Fence Co., Limited, Moncton, New Brunswick

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

SHORTHORN BULLS FOR SALE.—WALTER E. EATON, Upper Canard, Kings Co., N. S.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. McLEAN & SONS, Hopewell, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

FOR SATE.—Registered Shorthorn Bull, fifteen months. Color, dark red; weight, eleven hundred pounds.—ISAAC CHIPMAN & SON, Chipman Corner, Kings Co., N. S.

MARITIME REAL ESTATE CO., Sackville, N. B., are making up their new lists of "Farms for Sale", parties wishing to buy or sell, please write.

$25.00 buys a No. 3 Sharples Separator, nearly new. In first class shape. S. B. HATHEWAY, Fredericton, N. B.

REGISTERED GUERNSEYS FOR SALE.—One bull, 3 years old; bull calf, 6 months old; one heifer, 8 months old.—W. R. McCREADY, Jacksonville, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

FARMERS.—We are buyers of dressed pork, poultry, fresh eggs and want prime quality goods. Small or large shipments. Prompt returns.—JOHN HOPKINS, St. John, N. B. Established, 1867.

WE have four second hand gasoline engines for sale, sizes 3 to 6 horse power. All in good order, just been overhauled. Write for further particulars if interested. EMPIRE CREAM SEPARATOR CO. LTD., Sussex, N. B.

WANTED.—Traveller to assist local agents in the sale of Cream Separators and Gasoline Engines. Apply, with salary wanted, and recommendations first letter. All correspondence confident.—EMPIRE CREAM SEPARATOR CO., Ltd., Sussex, N. B.

"Agents make BIG MONEY SELLING "VOL-PEEK" Granite Cement. Mends holes in Graniteware, Iron, Agate, Tinware, etc. Mends a hole in 1 minute. Every housewife buys. Greatest seller on the market. Agents make over 100 p. c. profits.—V. NAGLE, WESTMOUNT, QUE.

MONEY MANUFACTURED.—The progress now being made by Canadian manufacturers and merchants should be taken advantage of. Write for information about a safe, quick way of doubling your money. Address ROBERT E. KEMERER, Confederation Life Building, Toronto.

WANTED.—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W A. JENKINS' MFG., CO., London, Ont

N. B. Potatoes

I grow and have for sale large quantities of Potatoes. Seed varieties a specialty.

Geo. A. Fawcett, Middle Sackville, N B.

For Sale.

1 pr. fine S. C. Buff Orpingtons; 1 pr. S. S. Hamburgs also 1 good pen S. S. Hamburg chickens; all bargains to clear, also some of the best S. C. R. I. Red Cockerels in the Province, $1.50 to $3.00 each. All A1. stock. Satisfaction guaranteed.

THE BURLEY POULTRY CO.,
46 Princess St. St. John, N. B.

Incubators For Sale.

The Hartland Poultry Yards are selling incubators and brooders. You will want one of these machines, if you are going to hatch chickens this season. Send for catalogue, it is free.

HARTLAND POULTRY YARDS.
Harrtland, N. B.

FARMER'S ALMANAC FREE.—See advertisement of the Na-Dru-Co. Almanac in this issue and write today for a copy of this book of valuable information.

GILLETT CONSPIRACY CASE.—All the papers have been turned over to the Company in pursuance of an order made by Judge Denton in this case, the formulas, plans, and drawings of machinery which the detectives found at the houses of Morrison and Gibson, former employes, have been turned over to the Gillett Company.

STOCK NOTES.

A company of farmers has been formed at Southampton, York County, to purchase the imported Clydesdale stallion, "Southwick," brought to the province by Wm. Meharey, with the mares that were sold last month at St. John. Southwick is a large, smooth three year old of splendid draft type and calculated to greatly improve the draft horses of the district in which he is used. He has gone forward to Jas. A. Pinder, M. P. P., of Millville, where he will be kept until the season opens. Mr. Pinder, in addition to the mare, which he bought at the sale, also bought a two year old filly, Trim of Bampton, and she has been shipped with Southwick from St. John. "Ace of Spades," a seven year old black Clydesdale, which exited so much admiration from horsemen attending the sale, has been sent to the Provincial Hospital Farm, pending his sale to some district where he may be wanted. A number of agricultural societies are anxious to have this horse placed in their districts and it is expected before long a sale will be consummated. Two Percherons, "Garnin," a handsome four year old, and "Hobleur," a three year old, just landed from France, have been shipped by Mr. A. H. Thomson to Woodstock, where there are a number of enquiries for stallions of this breed. Mr. Thomson, who has been all his life in the purebred stock business, is prepared to take orders for importation of any kind of purebred stock from Europe. He comes to the Department of Agriculture with recommendations of the highest order from the men with whom he has been doing business in various countries, and also from the officers of the British War Office, for whom he has bought largely in the past. His connection with the breeders in both Great Britain and France is of the best and he can be depended upon to carry out any arrangements he makes to the letter. He is prepared to bring stock, subject to inspection by the Department of Agriculture and to do business on a business basis. The condition in which his first shipment arrived shows that he is looking for a continuation of business, rather than immediate sales at large profits, as contrary to the usual practice of Percheron horse importers. His horses, instead of being overloaded with fat, which is a serious detriment to their breeding powers, have arrived in splendid breeding condition, each of them capable of carrying from two to three hundred pounds more flesh than at present. Moderate prices and quick sales for cash are his methods, instead of large prices with long term notes. This is an excellent avenue for the stock men of New Brunswick, who wish to secure the services of a thoroughly competent judge and honest importer to improve their studs, herds and flocks. Correspondence may be opened with Mr. Thomson through the Department of Agriculture, Fredericton, where all letters to him may be addressed.

Messrs Wm. Jamieson and Alex Walker, of Sussex, have recently purchased the three years old grey Percheron stallion "Glaneur" from Mr. A. H. Thomson, who imported him with two others direct from France at the instigation of the Provincial Department of Agriculture. This horse is perhaps more typical of the old pure Percheron blood than any stallion of this breed that has come to the province for some time, and the farmers of Kings County are to be congratulated on having such a fine specimen of this noted draft breed made available for their use. What old "Prince Imperial" did years ago for the farmers of Carleton County, "Glaneur" is capable of doing for the farmers of Kings. He should be the means of adding thousands of dollars to the bank accounts of horse breeders of the County.

See our ad. on this page of this paper.—LOGAN BROS., Amherst, N. S.

MARKETS.

Charlottetown Market.

GRAIN.—Wheat, $1.00 per bushel; oats, 40c per bushel; peas, $1.15 per bushel; barley, 85c per bushel; buckwheat, 90c per bushel.

FEEDSTUFFS—Bran, $1.30 per cwt.; shorts, $1.40 per cwt.; middlings, $1.40 per cwt.; corn, $2.00.

LIVE STOCK.—Stockers, $25.00 to $30 00; milch cows, $35.00 to $45.00.

DRESSED MEATS.—Beef (carcass), 6c to 8c; beef (retail), 8c to 12c: mutton, 8c to 12c; lamb, 10c to 12c; pork, selected, 10c to 15c.

HORSES.—Drafters, $1.25 to $1.50.

DAIRY PRODUCTS.—Creamery butter, 25c to 26c per pound; dairy butter, 25c per pound; cheese, 13½c to 16c per pound

POULTRY AND POULTRY PRODUCTS.—Eggs, 32c to 34c per dozen for strictly fresh; fowl, 11½c to 12c per pound; chickens, 12c to 15c per pound; ducks, 15c per pound; geese, 14c per pound; turkeys, 18c per pound.

FRUIT.—Apples, $2 00 to $4.00 per barrel; cranberries, 12c per quart; honey, 16c per pound

VEGETABLES.—Carrots, 60c per bushel; potatoes, 35c to 40c per bushel; turnips, 20c to 25c per bushel; beets, 50c to 60c per bushel.

MISCELLANEOUS.—Hay, 50c to 55c per cwt.; straw, 25c to 35c per cwt.; wool, 20c per pound; beef hides, 10c per pound; calf skins, 14c per pound; sheep skins, $1.00; lamb skins, $1.00.

Opportunity for Breeders

Of the Maritime Provinces to secure breeding stock from the best herds, studs and flocks of Great Britain and the Continent of Europe by direct importation, without expense of special trip and at minimum cost.

An importer and dealer of many years experience is prepared to fill orders for all classes of stock, subject to inspection on arrival by officials of the Provincial Departments of Agriculture, delivery upon conclusion of inspection and quarintine. No inflated prices but turn over made as low as quality of stock will permit. Horses, Cattle, Sheep or Swine bought as orders may be received. Reference from prominent stockmen and officers of the British War Office may be seen at the Department of Agriculture, Fredericton. Correspondence solicited. Address

A. H. THOMSON,
Care Dept. of Agriculture, Fredericton, N. B.

Homestead Farm

Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

LOGAN BROTHERS, - - Amherst Point, N. S.

PROPERTY FOR SALE.

Property of 60 acres, new modern house, good barn and poultry buildings, frontage of 1,700 ft. on Main street, and ¾ mile from centre of Town of Sussex. It is beautifully situated and a most desirable country place and suitable for general farming, fruit and poultry raising, &c. Terms and further description on application.

G. S. KINNEAR, - Sussex, N. B.

Halifax Prices.

GRAIN—Oats, 55c; buckwheat, $2.50 per 100 lbs.

FEEDSTUFFS.—Bran, $1.40 per bag; shorts, $1.50 per bag; cracked corn, $1.80 per bag; corn meal, $1.90.

DRESSED MEATS.—Beef (carcasses) 7c cow, 8c steer; beef (retail) 10c to 20c; mutton, 7½c per lb; veal, 7c per lb; lamb, 11c per lb; pork, 10½c to 11c

HORSES.—Drafters, $250.00; roadsters, $200 to $300, carriage, $150 to $250.

DEIRY PRODUCTS.—Creamery butter, prints, 28c to 29c; solids, 26c to 27c; creamery prints, 24c to 25c, tubs, 22c to 23c; cheese, twins 13¼c, large, 13c.

POULTRY AND POULTRY PRODUCTS.—Eggs fresh, 30c to 35c, case 27c to 28c; fowl, 12c per lb; chickens, 15c per lb; geese, 17c per lb; turkeys, 22c per lb.; ducks, 17c per lb.

FRUIT.—Apples, $1.50 to $3.00; evaporated, 7½c to 8c per lb; cranberries, $7.00.

VEGETABLES.—Carrots 60c bush; potatoes, $1.50 bag 3 bush; turnips, 90 c bbl.

MISCELLANEOUS.—Hay, $15.00; straw, $9.00; wool, 21c; beef hides, 10c to 11c; calf skins, 15c to 18c; sheep skins, 80c to $1 00

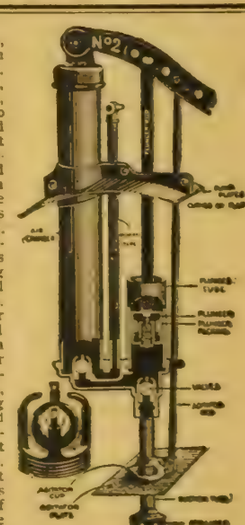
Beef, native, is very scarce and most of beef used here is from Ontario.

Butter, dairy prints are coming forward quite rapidly from Annapolis Valley as usual at this time of year, and is finding a ready market in preference to held dairy solids and tub, creamery continues scarce and higher prices are looked for, stocks of all butter held here are very light in comparison with a year ago. Eggs, fresh laid, are coming forward slowely, but with the continuing mild weather will no doubt come forward more freely during the next ten days. Stocks of cured are being called upon heavily and stocks are no ue too large to carry over until fresh are in sufficed quantities to supply the demand. We do not look for any light prices on eggs.

Potatoes are advancing slowly, the supply in store is very light and higher prices are looked for. Apples, the market is glutted at present on account of low prices in England and good apples can be obtained at very low prices.

Fully nine out of every ten cases of rheumatism is simply rheumatism of the muscles due to cold or damp, or chronic rheumatism, neither of which require any internal treatment. All that is needed to afford relief is the free application of Chamberlain's Liniment. Give it a trial. You are certain to be pleased with the quick relief which it affords. Sold by all dealers.

Mr. Leigh, Supt., put on the N. Y. C. Stock Yards, Buffalo, N. Y., 40 tons (80 000 lbs.) of Cold Water Paint with these wonderful Hand Machines In this event the Spramotor has proven its value. A demonstration like this is more convincing than a bookful of arguments. The Spramotor is guaranteed for a year. In all sizes for Orchard, Potatoes, Painting, Whitewashing Vineyard and Weed destruction. Say what you want it for. This ad. will not appear in this paper again; if interested write now.



W. C. Heard, 1380 King St., London.

READ THIS.

If you want an incubator you should talk to me, I have the goods that are right. If you want credit I will give it to you. A postal and I will mail you particulars. Do not buy until you hear what I have to say.

J. B. DAGGETT,
Tracey Mills, Car. Co., N. B.

FOR SALE.

Holstein Bull Calf three months old.
RUSSELL KELLY,
McKay's Siding, Col. Co., N. S.

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The Balanced Ration and its Importance.

BY PROF. M. CUMMING.

FOODS vary in the amount and character of the nutrients which they contain. Some, like cotton-seed meal, linseed meal, pea meal, etc., or meat, eggs and beans are especially rich in nitrogenous or muscle producing matter. Others, like potatoes, corn, or cream, etc., are equally rich in carbonaceous or heat and fat producing matter. Still others, like oats, and bran, and clover hay, or wheat bread, or whole milk, contain these two classes of nutrients in about an ideal proportion. Experience has shown men that, if they eat excessively of the nitrogenous class of foods, they not only derive less energy than might be anticipated from the amount of food consumed, but their digestion soon becomes impaired, and smaller results have followed the consumption of foods too rich in carbonaceous matter. Men have, therefore, learned the wisdom of eating such a mixture of foods as will combine in the propor proportions these two classes of nutrients. Experience has also shown stock feeders that, if their animals are to be fed so as to give the greatest possible returns consistent with economy and, at the same time, remain in the best of health, they must be given fodders, which, together, afford a proper proportion between the nitrogenous nutrients on the one hand and the carbonaceous nutrients on the other. A balanced ration, whether for man or beast, is nothing more nor less than a ration in which various fodders are used in such amounts as to provide the nitrogenous and carbonaceous constituents in the best possible proportion, Meat (a nitrogenous food) and potatoes (a carbonaceous food) combine to make a better food for mankind than either alone. Together they form a fairly well balanced ration, Either alone is too one sided in its character. So also, cotton-seed meal or linseed meal fed alone to cattle are too rich in nitrogenous matter, but, when mixed in reasonable proportions with other more carbonaceous foods, like corn, or hay, or roots, give excellent results.

Apart from the labratory altogether, observant feeders have, in the course of time, arrived at an appreciation of the importance of giving to their cattle a well balanced ration, and have obtained a practical knowledge of the proper porportions. However, it has remained for the careful investigator to ascertain the principles underlying and make animal feeding a more or less exact science. He has done so, not in any mysterious manner, but by putting together the observations of practical men, and by carrying on actual experiments in the feeding of animals. As a result, his investigations have proved of great value, even to the practical feeder, who pretends to ignor the principles of science, but who; were he to trace its knowledge to its ultimate source, would, many times, find it issueing from the laboratory of the scientific man, who, by careful investigation, has determined the relative importance of the various classes of nutrients in fodders. Cotton Seed Meal, for example, was formerly applied directly to the land as a fertilizer, but, as a result of the knowledge discovered of the importance of balancing up the nitrogenous constituents of a ration as set forth by the scientists, cottonseed meal is to-day used almost entirely as an animal food. It is our purpose in this article to present as clearly as possible the more important underlying principles of the balanced ration.

To commence at the beginning, Agricultural Chemists have determined the constituents of the animal body. They have determined, too, the constituents of the fodders by means of which the animal body has been built up, and they have also determined the percentages of nutrients of these fodders which are digestible, as well as the percentage which are indigestible.

In the animal body they have found water, ash, protein and fat; in plants they have found these four, together with carbo-hydrates and crude fibre. They have also ascertained that the four groups of constituents of the animal body are derived from these six groups of the plant kingdom, together with water and air. A few notes in regard to each of these classes of constituents will help to make this matter clear.

WATER.—Water is the most abundant constituent of the animal body, its proportion varying from 40% to 85% of the total weight, according to the condition and age. It is indispensable to animal life. Animals take this into their system largely in its pure, unmixed form. However, even the dryest fodder they consume, such as bran, or oats, contain about 10% of water, and such foods as grass, roots, ensilage, etc., may contain from 80% to 95% of water. Water derived from these succulent foods, as they are called, is much more effective in the animal system than in its pure, unmixed form. So far, however, as nutrition is concerned, we can take it for granted than any combination of foods which the skilled feeder would give, contains sufficient moisture and we will not, therefore, refer to this component to any further length.

ASH.—Ash is the mineral matter which remains after complete burning. From two per cent. to five per cent. of the animal body is ash or mineral matter. It consists of lime, potash, soda, magnesia, from, phosphoric acid and sulphuric acid. While forming an important part of the blood, flesh and tissues, ash enters most largely into the composition of the bones. The amount of ash contained in the various fodders, differs considerably, as may be seen in the following table:—

In 100 pounds	Indian Corn,	there are	1.5	pounds	Ash.
" 100	"	Wheat Bran,	"	"	5.8	"	"
" 100	"	Oats,	"	"	3.0	"	"
" 100	"	Timothy Hay,	"	"	4.4	"	"
" 100	"	Clover Hay	"	"	6.2	"	"

The percentage of ash in other common fodders, will be found in the table submitted at the end of this article. Almost any ordinary combination of foods will contain enough ash for needs of the animal system. Cornmeal, glutenmeal, etc., are, however, markedly deficient in ash, and it has been found by actual experiment that animals fed largely on foods of this class will develop a much weaker bone frame than animals reared on such ash rich foods as clover hay, oats and bran. So far as nutrition is concerned, we may as with water assume that any combination of fodders fed under our conditions, will contain sufficient ash for the needs of the animal system, and so we will not again refer to this component of fodders.

PROTEIN.—The word protein is a general term applied to numerous compounds which make up the organic part of the bone, cartilage, muscle, skin, hair, wool, feathers, etc. The white of an egg, the casein of milk, dry lean meat, wheat gluten, are all well known examples. Protein is of the utmost importance in the animal economy. It is the flesh and tissue former and also the source of the solids not fat which constitutes much the larger part of the solids of milk. Plants of the clover family are rich in this compound. Timothy is relatively poor. Bran and middlings contain a fairly large proportion, whereas cornmeal and barley are relatively deficient. Such concentrated foods as linseed meal, cotton seed meal and gluten meal are very rich in protein. (This protein group is subdivided into Albuminoids, being the more complex forms and usually insoluble in water, and Amides, being the simple forms and usually soluble in water and so capable of being transformed from cell to cell in the plant. In young, growing plants a large portion of the protein is in the Amide form; in the mature plant, practically all the protein is in the Albuminoid form.) While nitrogen is the most important element, protein also contains carbon, hydrogen and oxygen (the three elements that constitute fat and carbo-hydrates) and sulphur. From its analysis, we will not be surprised to learn it can also be used like carbo-hydrates and fat, as a fuel to supply heat. Protein is, however, too expensive a part of our fodders to be used for this purpose, fat and carbo hydrates being much cheaper fuels The economic feeder should, therefore, so understand the composition of foods that, by judicious balancing, the protein may be conserved to build up the animal tissue and to form the nitrogenous part of such products as milk, wool, etc., and not be wasted for heat production. Young growing animals require a large amount of protein in their food to build up their tissues. Cows giving a large flow of milk also require a large amount of protein As, under Maritime Province conditions, protein rich foods are usually much more expensive than foods rich in carbo-hydrates and fat, it is exceedingly

important that, from the standpoint of economical feeding, this subject of balancing rations be thoroughly understood.

FAT.—This term is applied to the whitish, greasy, easily melted part of the animal tissue, ordinarily found in all parts of the body. It commonly constitutes from six to thirty per cent. of the live weight of animals. It contains carbon, hydrogen and oxygen, but no nitrogen. All plants contain a certain amount of vegetable oils, corresponding to the fat of the animal body. (In making his analysis, the chemist extracts this fat with ether, which, however, also extracts wax, resin and green coloring matter. So far as is known, these have about the same feeding value as pure fat. In virtue of the above, the reader will often notice in text books that instead of giving the percentage of fat in the fodders, the chemist gives the percentage of ether-extract.) In the animal system fats perform three functions: a—They supply, as they are digested and broken down in the animal system, heat and energy. b—If an excess, over what is required for the production of heat and energy is digested, storage as fatty tissue usually takes place. c—When digested, fat protects the more costly protein from being consumed, as described above, to supply heat and energy.

CARBO-HYDRATES.—The carbo-hydrates of food are chiefly starch, pentosans, sugars and celluloses; these substances consist of carbon, hydrogen and oxygen, the last two elements being in the proportion to form water (two parts hydrogen and one part oxygen)—hence the name From their analysis, it will be seen that carbo-hydrates contain the same elements as fat. Investigation has shown that their function in the animal system is identical with the function of fat, which see above. For these purposes, however, fat is about 2.4 times as efficient as an equal quantity of carbo-hydrates.

CRUDE FIBRE —This is the frame work, forming the walls of the cells of the plant. It is particularly abundant in hay, straw and the hulls of seeds. It is the least valuable of the nutrients contained in foods, being, to a large extent, indigestible. That part, which is digestible, is classed, by agricultural chemists, (since it contains the same three elements, carbon, hydrogen and oxygen) as carbo-hydrates.

At the end of this article will be found a table in which is given the total dry matter (by subtracting from 100, the student can ascertain the total water) ash, protein, crude fibre, carbo-hydrates and fat contained in the standard fodders. There is also presented the amount of protein, carbo hydrates and fat in each fodder, which is digestible. These latter figures have been much more difficult to obtain than the former, for, in order to secure them, chemists have had to feed these various fodders to animals, carefully weighing the total amount fed, equally carefully weighing the undigested part, the solid excrement and thus determining the actual amount digested by difference.

NUTRITIVE RATIO.—With the aid of the figures presented in the last three columns of this table, viz., the digestible protein, carbo-hydrates and fat in 100 pounds of each of the fodders, it is possible to put into definite figures the relation which exists between the protein, i. e., flesh forming constituents, and the carbo-hydrates and fat, i. e., the heat and energy producing constituents, and thus have a common standard of comparison between different fodders or combinations of fodders. This relation has been technically termed the Nutritive Ratio, which may be defined as "the ratio which exists between the amount of the digestiple protein in a given feeding stuff and the amount of the digestible carbo-hydrates and fat it contains." An actual illustration will make this clear. We will determine the nutritive ratio of oats. Turning to the table, we find the following particulars : 100 pounds of oats contain 9.2 pounds digestible protein, 47.3 pounds digestible carbo-hydrates and 4.2 pounds digestible fat. The nutritive ratio accordingly is as 9.2 pounds protein is to 47 3 pounds carbo-hydrates, plus 42 pounds fat. This, however, is stated in too complicated a form, and moreover, is considerably involved from the fact that, as stated above, 1 pound of fat is, for purposes of supplying heat and energy, equal to 2.4 pounds of carbo-hydrates. Scientists have, therefore, agreed, in order to simplify this, to state the number of pounds of fat in terms of carbo-hydrates which is, accordingly, done by multiplying by 2.4. Hence, 4.2 pounds fat in oats, is equal to 4.2, multiplied by 2 4=10 08 pounds carbo-hydrates. Adding this to 47.3 pounds carbo-hydrates, we ascertain that 100 pounds of oats contains the equivalent of 57.38 pounds carbo-hydrates. The nutritive ratio, is therefore, as 9.5 is to 57.38, or as 1 to 6.23; i. e., in oats there are 6.23 times as much carbonaceous or heat producing matter as of nitrogenous or flesh producing matter. In the same way the student may calculate the nutritive ratio of other fodders. To repeat : first multiply the number of pounds of fat by 2.4; add the result to the number of pounds of carbo-hydrates; the nutritive ratio is then as the number of pounds of protein to this product, which may be more conveniently represented by stating the relation in comparison with one pound of protein. For example :—

The nutritive ratio of bran is..1 to 3.74
The nutritive ratio of corn meal is.....1 to 9.7
The nutritive ratio of timothy hay is.....1 to 16.7
The nutritive ratio of clover hay is.....1 to 5.8

Nutritive ratios are spoken of as wide, medium or narrow. A wide nutritive ratio is one in which the carbo-hydrates and fat greatly excel the protein as, for example, in corn meal or timothy hay. A narrow nutritive ratio is one in which there is a much closer proximation between the amount of protein and the carbo-hydrates and fat, as in bran or in cotton seed meal, the nutritive ratio of which is 1 to 1.24. Examples of medium ratios are oats' clover hay, etc.

Our readers should now clearly understand how to calculate the nutritive ratio of any single fodder. However, we are more interested in calculating the nutritive ratio of a whole ration of fodders, such as would be given to the cow in the course of a day. The principle in this case is exactly the same, the only addition being that it is necessary to add together the amounts of the various nutrients in the ration, after which the calculation is the same as with a single ration. To make this clear, we will calculate the nutritive ratio of a day's ration for a dairy cow, which, in the experience of the writer, has proved most satisfactory for cows, giving them 25 to 40 pounds of milk per day.

The following is the ration:—

Mixed Clover and Timothy Hay	16 lbs.
Mangels	40 "
Bran	3 "
Middlings	3 "
Oats	1 "
Cotton Seed Meal	1 "

By reference to the appended table, which gives the amount of dry matter and of digestible protein, carbo-hydrates and fat in 100 pounds of various fodders, one can easily calculate the amount of these constituents in the actual number of pounds of each fodder in the ration as follows :—

Fodder.	Amount.	Dry Matter.	Protein.	Carbo-hydrates	Fat
Timothy Hay	8 lbs.	6.91	.22	3.47	.11
Clover Hay	8 "	6.77	.54	2.86	.14
Mangolds	40 "	3.64	.44	2.16	.04
Bran	3 "	2.64	.37	1.18	.08
Middlings	3 "	2.63	.38	1 59	.10
Oats	1 "	.89	09	.47	.04
Cotton Seed Meal	1 "	91	.37	.17	12
		24.42	2.41	11.90	.63

Multiply the weight of fat .63 by 2.4 equals 1.152; add this to the weight of carbo-hydrates, 11.90, equals 13 412. The nutritive ratio is, therefore, as 2.41 to 13.412, or 1 to 5.56.

This would be considered, by scientists, a very well balanced ration for cows giving the amount of milk mentioned above, and we have no doubt that many of our readers have learned, from experience, that a ration somewhat similar to the above will give excellent results. The matter has been extensively investigated by agricultural chemists in Germany, the United States and elsewhere, who, as a result of their investigations, have given to us the amounts of dry matter, together with the amounts of digestible protein, carbo-hydrates and fat which they consider constitute a balanced ration. We will present, herewith, some of the best recognized standards for dairy cows:

	Total Dry Matter.	Protein	Carbo-Hydrates	Fat.	Nutritive Ratio.
Wolff German Standard	24 lbs	2.5 lbs	12 5 lbs.	0.4. lbs	1 to 5.4
Well proposed American Ration	24.5 "	2.15 "	13.27 "	.74 "	1 to 6.9
Atwater and Phelps proposed American tandard	25.0 "	2.5 "	12 to 13 "	.5 to 8 "	1 to 5.6

Several German investigators, notably Lehmann and Kuhn, have recommended standards varying with the actual milk flow, naturally advising a narrow ration when the cow is milking heavily and a wider ration when the cow is giving less milk. Their standards, however, average about the same as the Wolff German standard, as given above. In this connection, the reader will observe that the ration, which we discussed above, approximates very closely this Wolff standard. I may say, however, that as the cow advanced in her lactation period, we would, for purposes of economy, feed a gradually widening ration, so that our own practical experience would conform largely with the standards announced by Wolff and modified by Lehmann and Kuhn.

The most practical use to which a knowledge of these standards can be put occurs when a farmer, wishing to increase the milk flow of his cows on an economical basis, purposes buying some extra feed. Let us suppose he has made a calculation as above, and has ascertained that the ration he is feeding his cows contains the following nutrients :

Dry matter	Protein	Carbo-hydrates	Fat.
25 lbs.	1.8 lbs.	13.5 lbs.	.6lbs

The nutritive ratio of this is 1 to 8.3.

We have known farmers, under such conditions to purchase cornmeal, the nutritive ratio of which is 1 to 9.7. Manifestly, although the cornmeal would cause some increase in the milk flow, it would not help to narrow the ration so as to approximate the standards: not that that in itself is important. But in so far as the standards are based on careful observation and investigation, this farmer would find himself bette r off were he to purchase some fodder, relatively rich in digestible protein, as, for example, cotton seed meal, gluten meal or oil cake. By feeding one or two pounds less hay, and adding from one to one and a half pounds of any of the above feeds, the farmer would give his cows a ration that would almost invariably insure a larger flow of milk at a relatively small increase of cost.

With a very little practice, one can become familiar with the use of these tables and can thus calculate the actual nutrients which he is giving his own cows. By making a few trials he can also ascertain what fodder will bring his ration up to the standard.

While, however, we consider a knowledge of these principles exceedingly important, still we would be far from recommending any stock feeder to blindly follow any of these standards. They are simply guides, a knowledge of which will often save errors and enable

Fodders.	Total Food Constituents. Percentages.						Ingestible Ingredients. Percentages.		
	Dry Matter.	Ash	Protein	Crude Fibre.	Carbo-hydrates	Fat.	Protein.	Carbo-hydrates	Fat.
Cornmeal	89 1	1.4	92.	1.9	68.7	5.0	7.9	66.7	4 3
Wheat (dark feeding)	89.5	1.8	11.9	1.8	71.9	2.1	10.2	69.2	1.7
Flour	90.3	4.3	19.9	3 8	56.2	6.2	15.5	61.3	2.0
Bran	88.1	5.8	15.4	9.0	53.9	4.0	12 2	39.7	2.7
Middlings	87.9	3 3	15.6	4 6	60.4	4.0	12.8	53.0	3 4
Rye	88.4	1.9	10.6	1 7	72.5	1.7	9.9	67.6	1 1
Barley	89.1	2 4	12.4	2.7	69.8	1.8	8.7	65.6	1 6
Malt Sprouts	89.8	5.7	23.2	10.7	48.5	1.7	18 6	37.1	1.7
Brewers' grains (wet)	24 3	1.0	5.4	3 8	12.5	1.6	3.9	0.3	1.4
Brewers' grains (dried)	91.8	3.6	19 9	11.0	51.7	5.6	15 7	38 3	5.1
Oats	89.0	3.0	11.8	9.5	59.7	5.0	9.2	47.3	4 2
Buckwheat	87.4	2.0	10.0	8.7	64.5	2.2	7.7	49.2	1.8
Flax Seed	90 8	4.3	22.6	7.1	23.2	33.7	20.6	17.1	29.0
Linseed Meal (old process)	90.8	5.7	32.9	8.9	35.4	7.0	29 3	32.7	7.0
Linseed Meal (new process)	89.0	5.8	33.2	9.5	38.4	3.0	28 2	40.1	2.8
Cotton Seed Meal	91.8	7.2	42.3	5.6	23.6	13.1	37 2	18.9	12.2
Gluten Meal	91.8	1.4	24.5 to 37.6	1.1 to 6.1	39 to 50.8	5 to 10 5	21 to 33 1	35 to 45.6	4.7 to 15.6
Pea Meal	89.5	2.6	20.2	14.4	51.1	1.2	16 8	51.8	0.7
Fodder Corn	20.7	2.7	4.5	14.3	34.7	1 6	1.0	11.6	0.4
Pasture Grass	20.0	2.0	3.5	4.0	9.7	0.8	2 5	10.2	0.5
Timothy	86.8	4 4	5.9	29.0	45.0	2 5	2.8	43.4	1 4
Wheat Straw	90.4	4.2	3 4	38.1	43.4	1.3	0.4	36 3	0 4
Oat Straw	90.8	5.1	4.0	37.0	42.4	2.3	1.2	38.6	0.8
Barley Straw	85.8	5.7	3.5	36.0	39.0	1 5	0 7	41 2	0 6
Red Clover Hay	84.7	6.2	12.3	24.8	38.1	3 3	6.8	35.8	1.7
Alsike Clover Hay	90.3	8.3	12.8	25.6	40.7	2.0	8.4	42.5	1 5
Alfalfa Hay	91.6	7.4	14.3	25.0	42.7	2.2	11.0	39.6	1,2
Corn Silage	20.9	1.4	1.7	6.0	11.0	0.8	0.9	11.3	0.7
Potatoes	21.1	1.0	2.1	0.6	17.3	0.1	0.9	16.3	0.1
Beet Mangolds	9.1	1.1	1.4	0.9	5.5	0.2	1.1	5.4	0.1
Rutu-bagas	11.4	1.2	1.2	1.3	7.5	0.2	1.0	8.1	0.2
Rape	14 0	2.0	2 3	2.6	8.4	0.5	1.5	8.1	0 2
Cow's milk	12.8	0.7	3.6	.....	4.9	3.7	3.6	4.9	3.7
Cow's milk (colostrum)	25.4	1.6	17.6	.....	2.7	3.6	17.6	2.7	3 6
Skim milk (gravity)	9.6	0.7	3.3	.....	4.7	0.9	3.1	4.7	0.8
Skim milk (centrifugal)	9.4	0.7	3.1	.....	5.3	0.3	2.9	5.2	0.3
Buttermilk	9.9	0.7	4 0	.....	4.0	1.1	3.9	4.0	1.1
Whey	6.6	0.4	0.6	.....	5.1	0.1	0.8	4.7	0.3

the feeder to make a more intelligent selection of fodders. An actual illustration may serve to best show their use.

Representatives of the Storrs (Connecticut), Experiment Station, a few years ago, visited the stables of nine dairymen, studying the rations fed and the amount of milk and butter produced. The representatives recommended new rations in every case narrower than were being fed, as in the following table :

	Digestible Protein	Nutritive Ratio.
Average of nine rations originally fed by Connecticut Farmer	1.68 lbs.	1 to 7 5
Average of ration adopted by armers recommendation	2.17 "	1 to 5.6

Following this advice, the dairymen saved 6 cents per 100 pounds milk and 2 cents per each pound of butter produced. Other instances might be produced, but we think that this one sufficiently illustrates the point, and with this we conclude our presentation of the subject, adding, however, a few notes with a view to making the subject a little clearer.

NOTES.

There are some principles which are not taken into consideration in figuring the nutritive ratio, but which are, nevertheless, exceedingly important. One of these is platability. The more palatible a ration is, the better will the cow thrive upon it. Well cured hay, though not differing greatly in analysis from poorly cured hay, will give decidedly better results. Straw, when cut and mixed with pulped roots and a little sprinkling of meal, will give better results than if these three feeds were fed separately. A mixture of grains will generally give better results than any single grain. Another principle is Succulence, or the amount of water contained in the foods given. This has already been discussed under the head of water in the first part of this article. The next, and by no means least important, is that the cost of different fodders must be considered. In the Western States, for example, where corn is very much much cheaper than any of the fodders that are richer in protein, it may still pay to feed a decidedly wide ration. The careful feeder must keep account of the cost of the extra ingredients added to his ration, and must also ascertain, by weighing, the increased production of milk or butter. If this lptter fails to more than off set the former, then the ration must be cheapened. It is assumed that the reader will make considerable use of the table submitted at the end of this article, and hence, a few notes are added in regard to this.

1. It will be noted that the amount of digestible protein, carbohydrates, and fat is considerably lower than the total amount of protein, carbo-hydrates and fat. The person who buys new fodders must keep this in mind, for, as a rule, the analysis given of these, if given at all, represents the total nutrients and not the disgestible nutrients contained.

2. By computing the nutritive ratio of milk and more particularly of the colostrum milk, the student will observe that, under a state of nature, growing animals receive a very narrow ration. As the animal grows, this ration becomes somewhat widened, bnt, under no condition, should young animals have to live upon fodders of a very wide nutritive ratio. On this account, clover hay excells timothy hay for all young stock and oats and bran and a little oil-cake excel any other grain feed for young stock.

3. New foods are being constantly put on the market—generally by-products from starch, breakfast food or sugar factories. It is impossible to give an analysis of these for there is no definite standard for them. The purchaser should always ask the analysis. By reference to the table appended, he can then form a fairly satisfactory estimate as to the value of any of the foods he may think of buying. Do not forget, however, that, as mentioned in the last nota, the analysis given of these patent foods is almost invariably of their total nutrients, as well as the digestibe nutrients of each of the standard fodders.

Getting on the Trail af the Indian.

A year or two ago Rev. F. A. Wightman, then of Alberton, P E. I., wrote an article for our columns suggesting that it would be a good idea to propagate the variety of Indian corn that was found with the native indians at the time that the white settlers took possession of Nova Scotia, and by a system of selection bred up a strain that would yield a fair quanty of stalk for soiling and ensilage purposes, and mature seed in districts where other varieties will not mature.

The following letter from Mr. R. B. Murray, Coxheath, Cape Breton Co., N. S., relates how he is succeeding in following the Indian's trail.

EDITOR MARITIME FARMER :—

Some years ago attention was called in the MARITIME FARMER to a variety of corn native to the Maritime Provinces.

About that time the writer had procured a sample of the seed. This was on a cob about two inches long and a rather poor specimen.

The corn is of the flint variety. As grown in Cape Breton it has about one third of the kernels ranging in color from a dark red to a shiny black.

Native Indian Corn.

Propagated by Mr. R. B. Murray, Coxheath, Cape Breton Co., N. S.

The kernels are in eight rows evenly set. When used green the flavor is superior to any other flint variety known to me. Three or four years, experiment has shown that this variety is capable of unusual development.

With a view to growing for the early market the yellow and the colored kernels have been planted separately so that the fourth year has produced a totally yellow and a totally black strain. The latter not promising to be of much market value, has not received the care that the former has so has not developed as large an ear. Last season, ears of the yellow strain were produced which were five to six inches long.

As is the case with all early varieties, there is usually only one ear developed on each stem. In the first year's growth several stems were noticed which had, besides a good ear, one or two rudimentary ears. The seed for the following year was taken from these stems. This plan has been followed since with the result that last season produced plants having four or five fully developed ears ranging in length from one and one half to five inches.

The aim in developing this variety is to produce a plant that will give a large number of medium sized ears. This variety of corn seldom grows more than three feet high so that the seed may be planted quite close together, say in rows two feet apart and the seed one or two inches apart.

I am sending you a few ears which you may give to any of your readers who wish to grow some of the corn.

ROBERT B. MURRAY.

Ice For Summer Use.

Foresight is needed in the dairy business if the best results are to be obtained. If loss and annoyance from over ripe milk next summer is to be avoided the proper steps must now be taken to secure ice. January and February afford an opportunity to cut and haul a supply for the dairy and for household purposes.

There are many reasons for keeping ice in store on the farm. Milk is a perishable product even in cold weather. In warm weather it requires careful handling to prevent its spoiling before reaching the factory. By cooling the evening's milk to 50 degrees the development of the germs is checked and it can be taken to the factory next day without fear of rejection because of sourness. Providing it has been kept cool, ten pounds of milk will make one pound of cheese. If allowed to get over ripe, twelve pounds of milk will be required for each pound of cheese. Here is a clear loss of from 10 to 20 per cent. to the patrons of the factory.

The Saturday night milk has to be taken care of at the farm. This will necessitate the keeping of it at a proper temperature until it can be handled on Monday morning.

Roughly speaking, 10 pounds of ice are equal in cooling power to 100 pounds of cold water. Thus 100 pounds of water containing 10 pounds of ice will do as much cooling as 200 pounds of the same water. Or, in other words, the use of ice in the water surrounding the milk may do away with the necessity for changing it. The same advantage applies in the case of using a special milk cooler. The ice can be placed in the receptacle which contains the supply of water for the cooler.

But the most important advantage in the use of ice arises from the fact that by its use the temperature of the milk can be reduced to, and maintained at, a lower point than is possible with the use of water alone; and a low temperature is absolutely necessary for preserving milk for lengthy periods. The temperature should be reduced to 50 degrees and maintained at that temperature when milk is to be kept from Saturday night or Sunday morning till the following Monday morning.

Attention is called to this matter at the present time, as now is the time to act. In bulletin No. 20, of the Dominion Department of Agricultere will be found a description of a combined ice house and milk stand that will suit the requirements of patrons of cheese factories. Copies of this bulletin may be obtained free on application to the Dairy and Cold Storage Commissioner, Ottawa.

The question is eften asked: "How much ice is required for a farm dairy?' This can be determined readily when it is known that a cubic foot of ice weighs 27 1-2 pounds. One ton of solid ice measures, approximately, 35 cubic feet. A consumption of 2 cubic feet (115 pounds) per day for four months would amount to nearly 7 tons. Allowing for the waste when such a comparatively small body of ice is stored, a building 10 feet square and 10 feet high will afford ample space for that quantity of ice, if it is carefully packed.

Fifty pounds per day for four months would amount to 3 tons. Allowing for waste, a solid block of ice 6 feet square and 6 feet high should be sufficient if properly stored.

For the purpose of estimating the weight of ice roughly by the number of blocks, the following table will be found convenient:—

12 blocks 18x36 ins. 8 ins. thick—1 ton
10 blocks 18x36 ins. 10 ins. thick—1 ton
8 blocks 18x36 ins. 12 ins. thick—1 ton
7 blocks 18x36 ins. 14 ins. thick—1 ton
6 blocks 18x36 ins. 16 ins. thick—1 ton
5 blocks 19x36 ins. 20 ins. thick—1 ton

Provincial Hortieulturist Takes up Duties at Fredericton.

EDITOR MARITIME FARMER.

The expert in fruit growing when it was announced some time ago by the Commissioner of Agriculture would be engaged to assist in developing the horticultural interests of the Province has arrived in Fredericton and entered upon his duties. His official title is Provincial Horticulturist. This gentleman, Mr. A. G. Turney, an Englishman of some seven years residence in Canada, comes from a position on the staff of the Ontario Department of Agriculture and most highly recommended by the men under whom he worked as well as by the President of the Ontario Agricultural College, where he took a distinguished course. Mr. Turney invites correspondence on all matters pretaining to fruit, flowers and vegetable growing and will be glad at all times to furnish information and advice on such matters and to attend meetings whenever possible. He will visit as many as possible of the illustration orchards in the early spring. Demonstrations of pruning, spraying and grafting will be given in the orchards and methods of cropping, fertilizing and cultivation will be discussed. Where time permits, Mr. Turney will be pleased to visit neighbouring orchards and discuss their treatment with their owners. Notice of the dates of these visits and demonstrations will be given in due time and everyone in the vicinity interest in fruit growing is invited to attend. In correspondence concerning horticultural matters complete details of the conditions bearing upon the subject should be given. Compliance with this suggestion will ensure more satisfactory answers. All communications should be addressed to The Department of Agriculture, Fredericton N. B.

W. W. HUBBARD.

The Conventions.

Before this issue of the MARITIME FARMER reaches our subscribers the New Brunswick Farmers' and Dairymen's Convention will be in full swing. The Forestry Convention will also be under way. The New Brunswick Horticulturists will meet on the 24th when the following programme will be carried out.

10 a. m.—President's address, discussion. Report of Secretary Treasurer, Appointing of nominating committee

2. p. m.—Report of nominating committee

Address—W. Saxby Blair, McDonald College, discussion

Address—Cultivation of Strawberries, Wm. B Fawcett, Sackville; H. H. Smith, Blissville, Sunbury Co.

8 p. m.—Address, Box Packing, G.H. Vroom, Middleton, N. S.

Address—A. G. Turney, Provincial Horticulturist.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—**"I saw your adv. in the MARITIME FARMER."**

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SUSSEX, N. B.

Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

FEBRUARY 22, 1910.

Dates of Issue.

March.... 8-22
April..... ..... - 12-26

NOVA SCOTIA MAKES INVENTORY OF FOREST WEALTH.

From the East came wisdom, it is said ; and the easternmost province of the Dominion, Nova Scotia is showing its wisdom by "taking stock" of its forest resources with a view to inaugurating a businesslike system of managing them. This inventory was begun during the past summer (1909) and under the charge of Dr. B. E. Fernow, dean of the faculty of forestry of the University of Toronto, who was assisted by the Chief Fire Warden of the province and several trained forests.

The southwestern part of the province, from Hants county westward, has been covered and it is expected that the survey will be completed during the coming summer.

The total area surveyed during the past summer was about 8500 square miles. The cost was very low, averaging less than twenty cents per square mile.

Only a rough survey, or "reconnaisance," was attempted. Each member of the party was assigned a certain district and allowed considerable latitude in choosing a way to cover this to the best advantage. Time and experience were saved by utilizing existing records and information secured from well-informed persons, where these were found reliable, the field-work consisting largely in checking in the information thus obtained, studying forest types, etc.

This information was then plotted in the field directly on large scale maps (2 inches to the mile) Among the points recorded were the extent of the burned areas, the degree of cutting on cut-over areas, the composition of the forest, the condition of the young growth or "reproduction" and the character of the farming lands, meadows, etc., within the farming country.

Dr. Fernow's report as to the possible future of the forest is interesting and encouraging. He remarks :—"Although the data on reproduction and rate of growth are not yet collated, it is safe to say that, if the fires are kept out (and apparently with the present organization still further perfected this can be done reasonably well) there is no dificulty in restocking by natural means most of the cut-over area, if not too severely culled. In the pure hemlock-spruce stands all that is necessary is to remove the old hemloch thoroughly and cleanly to have the young growth of spruce, already on the ground, take its place."

He thinks, however, that incorrect ideas are often held as to the growth of spruce. The white spruce, may, he says, when growing in comparatively open situations, make a sawlog in sixty years. The forest spruce, which is mostly red spruce, is of slower growth, and will probably not average a sawlog in less than a hundred years.

To a large extent the different species are found to be localized. Thus the white pine is found most plentifully in Shelburne and part of Queens, the hemlock in Annapolis and the spruce in Digby.

Heretofore estimates of Canada's forest areas, the stands of timber thereon and of the county's forest in general have been very largely guesswork. The action of Nova Scotia takes prominence as the first attempt on any large scale to substitute accurate information for this uncertainty. While no doubt errors have crept in, the estimates are at least based upon exact knowledge, and that is far more than can be said of former estimates. It is to be hoped that other provinces of the Dominion will see fit ere long to follow Nova Scotia's example in this line of work.

LET YOUR LIGHT SHINE.

Ever since there has been cloths there has had to be sewing. First this sewing was done with bone needles, and afterwards with steel needles, but until about two hundred years ago there were no thimbles. For hundreds and thousands of years people had been sewing and pricking their fingers and saying: "Oh, dear ! Oh, dear ! How very unpleasant pricked fingers are ! I just hate sewing, I wish I didn't have to sew any more !"

But they never did anything about it, but just kept on sewing and pricking their fingers for hundreds and thousands of years, till at last there came a man who thought. They happened once in a while.

Well this man who thought wasn't anybody in particular, just a metal worker who lived in London and worked hard every day except Sunday.

A button came off this metal worker's coat one day, as they have come off since the beginning of buttons, and while the metal worker was trying to sew it on again he pricked his finger—just as fingers had been pricked thousands and thousands of times before. But this time it was different because the metal worker was a man who thought. Instead of saying, "Oh, dear ! Oh, dear, I hate sewing !" he said, "I am going to try to think of something that will keep people's fingers from getting pricked, when they sew a button on to anything!"

Then he sat with his pricked fingers in his mouth and thought.

"I'll make a thimble !" he cried at last. Only he called it a thumb bell, because he was going to wear it on his thumb and it was to be made bell shaped. So he did. When it was finished he tried it on and found he could sew all his buttons on without once pricking his fingers.

He was so happy that he took his new thimble and showed it to all his neighbors, who all cried, "What a good idea ! Why didn't we think of that before ?" which is always the way of neighbors.

On another page of this issue will be found a letter from a Carleton Co. lady in which she sets forth a plea for more activity among our lady readers re expressing their ideas on various home questions and relating ways and means they have employed to advance their own education and in attractive home making.

Our columns are always open and free to as many of our lady readers as wish to advance thoughts that will assist their friends over the rough-spots of life. We welcome the Carleton Co. lady to our list of contributors and trust she and many more like her will continue to make good use of our columns. To our respective lady readers we would say you can do an unestimable amount of good in helping to make farm life more attractive by relating ways and means that you have tried and proved in accomplishing your household duties. You may have an idea that looks very simple to you—you have tried it—you have found it a better method for doing a certain piece of work than any other you had ever tried. Although you may look upon it as commonplace and not worth passing along it may be the very thing for which some other readers have been looking for a long time. You grasped the idea first either by planning it in your own mind or by getting the idea from some one else.

It will only take a few minutes for you to put your idea in writing. Send it to the MARITIME FARMER and it will carry the idea to every corner of the Maritime Provinces. If each and every lady reader would do just a little along this line they would be the means of assisting very materially in the upbuilding of our greatest institutions, our farm homes.

Some of your sister readers may say, "What a good idea! Why didn't we think of that before?"

Let your light shine.

TUBERCULOSIS.

A special international commission composed of representatives of Canada and the United States for the purpose of considering what can be done to supress and control the spread of bovine tuberculosis was in session last month in Buffalo. This commission was appointed at the meeting of the American Veterinary Medical Association in Chicago. Two days were spent at this preliminary meeting, mainly in an intense and thorough discussion of the situation as it practically exists among the cattle of both countries and the state of public sentiment among the producers and consumers of meat and milk products. It was made apparent at the start that a wide difference exists in various portions of the country, particularly among the farmers as to the importance of this disease and the necessity of combating it vigorously if great loss is prevented. It is clearly evident that with the farmer, in the main, rests the question, whether the disease is to spread or be checked.

Just in proportion as the farmers have been enlightened and made to understand just what the disease means to them, their future financial profit and the increase or decrease in consumption of milk and meat products, and the existence of their herds has progress been made in lessening the spread of the disease. This was shown in the reports that were made of present condition of affairs in Wisconsin, Minnesota and New York where the most of agitation on this question has been had. In these states, and particularly in Wisconsin much effort has been put forth by the authorities to hold at state and county fairs, farm institutes, dairy conventions and special meetings, public demonstrations of cattle slaughtered and exposed to view which were afflicted with the disease.

"Seeing is believing" and it is hard for a man to see the disease in its savage repulsiveness and not gain useful conviction that something ought to be done in a sensible, practical way to stop its spread.

The commission finally settled upon the following divisions of the question for future study and consideration; Education and Legislation; The Manner of its Dissemination; How to Determine its Location.

The commission will hold its second meeting at Detroit, the last week in February. The purpose is to study out if possible what is the wisest method to pursue in dealing with this great problem, for it is one that affects the future well being of the farmers of America and Canada more than any others that can be named. Several of the most prominent farmers in both countries have succeeded in ridding their herds of this disease. What a few have done the many may do, if they will inform themselves to the same extent upon the matter.

One thing is sure. The disease will not be stopped by weak, dilatory methods, ignorance of its character or denial of its existence. This will prove true in the case of each idividual or nation. The counsels of courage and resolution in facing the danger are a thousand times safer.

Nova Scotia Farmers in Annual Convention.

(Continued from last issue.)

TUESDAY EVENING.

On Tuesday evening Mr. Jas. A. Fraser, Editor of the Eastern Chronicle, in behalf of the town of New Glasgow, extended a cordial welcome to the visitors.

President Eastwood, of the Board of Trade, also gave the Association a hearty welcome to New Glasgow and spoke of the benefits accruing from the deliberations that take place at conventions, such as is annually held by the Nova Scotia Farmers' Association.

Mr. A. C. Bell, of New Glasgow Board of Trade, spoke of the rejuvenating influences of country life, the vanishing contempt for book-farming, the want of more co-operation and as the people of New Glasgow represent manufacturing occupations, while the delegates present represented agricultural occupations, much benefit would accrue from a co-mingling of the devotees of both classes.

An address, welcoming the Farmers' Association to Pictou County, was delivered by Mr. E. F. Porter, President of the Pictou County Farmers' Association.

ADDRESS OF WELCOME FROM PICTOU COUNTY FARMERS' ASSOCIATION.

Mr. President, Officers and Members of the Nova Scotia Farmers' Association, I beg leave, on behalf of the Pictou County Farmers' Association, to extend to you a cordial and hearty welcome to our fair county of Pictou.

It was with great pleasure that the Pictou County farmers heard that the fourteenth annual session of the Nova Scotia Farmers' Association would be held in the town of New Glasgow, which, on account of its central situation, affords a grand opportunity for the farmers of Pictou County to attend your meetings and thus meet the leading agriculturists of the province and by this means get in touch with the best and most up-to-date methods of farming.

What the farmer needs to-day, when competition is so strong, is better farming, a greater scientific knowledge of farming and more co-operation, and when we consider the fact that the farm products in Nova Scotia, for the year 1909, have made an increase of about $3,000,000 over the year 1908, this alone should give us encouragement and urge us on to greater attainments.

Great good has resulted from meeting of this Association in promoting the interest of agriculture in the days gone by and I hope that these meetings will result in awakening our farmers to a greater activity in every branch of farm industry and in stirring up a greater interest in our Association.

I, for one, feel very much pleased that the Farmers' Association decided to meet this year in this fair town of New Glasgow.

Again, gentlemen, I extend to you a most hearty welcome to our county and hope that you may see your way clear to meet with us again, in the near future.

MR. C. HOWARD BLACK in replying to the address, re-iterated the previous speakers' statements re the benefits accruing form the annual co-mingling of farmers and expressed his pity for those who were shortsighted enough to leave the farm to become, "a part of a machine" in the city.

HIS HONOR LIEUTENANT GOVERNOR FRASER was present and was glad to note the hopeful character of the young men in the audience. He put forth a strong plea for more education as a factor in cojointly utilizing brain and phisical powers.

He was glad to note the intelligent manner in which the business of the convention was being transacted and stated that it would be impossible to get such an intelligent gathering some years ago. The aim of every true Nova Scotian should be to do his and her best to make the province what it ought to be. He was proud to say of Nova Scotia that no man within her domains, who is willing to work, need be idle. No country has better markets in proportion to her crops.

The recent Winter Fair exemplified that we can grow our own beef, if we would. He referred to the splendid work that is being done by the Agricultural College and various farmers' gatherings. He expressed the hope that ere long Nova Scotia Horticulturists would so care for their trees and fruit that they may grow fruit of such quality as will warrant the shipping of the greater percentage of it in boxes instead of in barrels. The farm was the place to make ones home. Stick-to-it-ve-ness to ones profession is sure to win contentment. However, the abundance of life depended not on the things that one possesses and the person who works for daily wages must discount many of the comforts of life.

Each and every farmer in Nova Scotia should say "This is my home and here I am going to remain." The speaker had noticed that wherever a man devotes his time to his farm, he is always successful unless prevented by sickness or is overcome by some folly.

Industry, tidyness, thrift, progressiveness, independent thinking, independence, fearless intelligence, seizing opportunities, education and wise planning to make work easier were all touched upon by the Governor as traits that go to make a wise farmer and good citizen.

JOHM M. BAILY, M. P. P. for Pictou County took the audience on an imaginary tour of New Glasgow industries and surrounding country.

P. M. MCGREGOR, M. P. P., in addressing the Convention referred to the problems of transportation on high ways and public roads. He set forth a plea for more attractive conditions on the farm. A good public telephone system was one of the present day utilities that go to make life more desirable. The incorporation in our public school curriculation of agricultural literature was one of the things that should receive careful consideration at an early date.

Several of New Glasgow's young men and young women interspersed the speech making with solos and quartetts that were very highly appreciated and helped to make the session as pleasant as possible for the visitors.

ON WEDNESDAY MORNING

the committee on credentials reported that 46 agricultural societies were represented by 49 delegates. Eleven counties were represented by 43 delegates and the Maritime Stock Breeders Association had one delegate making a total from all associations of 90 delegates.

THE ELECTION OF OFFICERS resulted as follows:

President, Howard S. Kennedy, Alma, Pictou Co.

1st Vice President, W. H. Woodworth, Berwick, Kings Co.

2nd Vice President, R. M. Jackson, Jacksonville, Cape Breton Co.

Directors, H. W. Corning, Chegoggin, Yarmouth Co.; Samuel Freeman, Amherst, Cumberland Co., William O'Brien, Windsor Forks, Hants Co., A. S. McMillan, Upper South River, Antigonish Co., and Wm. Barss, Barss Corner, Lunenburg Co.

Auditors, E. S. Archibald and J. P. Landry, Truro.

Exhibition Commissioners, R. S. Starr, Port Williams, Kings Co. and Chas. R. B. Bryan, Durham, Pictou Co.

At a subsequent meeting of the executive, Mr. Bryan was again elected Secretary Treasurer.

Miss Caroline Carmichael, President of the East Pictou Council of Women gave an interesting talk on the work that the Women's Council is doing to assist in stamping out the Ragwort pest. Professor Cumming and J. A. Fraser added their tribute of appreciation to the work that is being done by Miss Carmichael and her coleagues and the Association extended their hearty vote of thanks

LAND TO BE DRAINED was the title of an interesting addres by F. L. Fuller, in which he thoroughly discussed the why and wherefore of land drainage. Mr. Fuller has had a great deal of experience in the work of land drainage and knows whereof he speaks.

DRAINAGE OPERATIONS.

was the subject of an interesting address by Prof. E. S. Archibald, of the Truro Agricultural College. He outlined the methods one should follow in determining the location of drains and the methods involved in getting proper grades, digging and laying the tiles.

Professor Cumming outlined the objects of his department in purchasing a drain digging machine, which for its initial tests will be operated by Mr. Fuller in Colchester County.

WEDNESDAY AFTERNOON.

There were no meetings on Wednesday afternoon so that the visitors might get a chance to visit some of the principal industries of the town. The majority of the visitors visited the Nova Scotia Steel Company's plant, the Glass works and some of the other minor establishments. About twelve of the members took opportunity of an invitation from the management of the Drummond mines, to visit their colliery. There they were most corteously received by the various officers in charge of the overground departments after visiting which they were taken in hand by Messrs Robert Laughlin and George Wright of the underground staff, who conducted them on a tour of the underground departments which is about 2,800 feet below the surface. Messrs Laughlin and Wright were as courteous a pair of officials as we have seen and they and the pleasant trip into the bowels of the earth will be long remembered by the visitors.

WEDNESDAY NIGHT.

After some discussion on the various resolutions that had been offered, Mr. Drummond, of the Dairy Division, Ottawa, gave an interesting address on "Dairying." He set fourth a plea for better feeding methods, better business methods and better breeding methods. He also gave a short account of the work that is being done along the lines of cow testing and exemplified the means by which farmers, who test their cows regularly are a power of example to their fellow farmers.

Rev. J. J. McNeil, Prof. M. Cumming and Mr. A. C. Bell were then appointed a committee to draft a resolution re a suggestion offered by Mr. Woodworth re the teaching of agriculture in our public school.

Mr. J. P. Landry, of the Poultry department, Truro, was the last speaker of the evening and gave an illustrated talk on poultry. There was not sufficient electrical power to make the lantern show the various picturs to good advantage but they were all clear enough to make the matter interesting and to show the various points Mr. Landry wished to emphasize.

THE CLOSING SESSION.

The last session of the Convention was held on Thursday morning. Mr. McMahon, the retiring president, introduced the new president, Mr. Howard Kennedy, who thanked the Association for the honor they had conferred on him, after which the Association extended to the retiring President an unanimous vote of thanks for the very efficient manner in which he had attended to his duties while in office.

REPORTS OF COMMITTIES.

The following reports of Committies were received and adopted:

RAGWORT, NOXIOUS WEEDS AND SEEDS.

To the N. S. Farmers Association:
Your committee beg leave to report as follows:

As for noxious weed seeds imported in bulk under bags or otherwise, your committee would have the matter referred to the Department of Agriculture so as to protect farmers from the spreading of these pests.

With regard to Ragwort we recommend that the Legislature be approached:

1st.—To enact a law compelling residents to destroy the weeds on their farms and compelling the Municipal Council to attend to the roadsides.

2nd.—To vote annually sufficient money to enable the County Associations to have the weed eradicated from vacant lands and timber leases.

We recommend that the Secretary of Agriculture be requested to confer with the Superintendent of Education so as to have placed in the hands of all teachers in the Province a bulletin on Ragwort and have same read and explained to all the children in the schools, so as to teach the up-coming farmers the dangers impending from this pest.

As for other noxious weeds we recommend that the Department of Agriculture be asked to take active measures to see that they be annually destroyed before seeding.

A. S. MCMILLAN,
C. H. BLACK,
ANDREW MCPHERSON,
REV. D. MCPHERSON,
} Committee.

AGRICULTURE IN THE SCHOOLS.

Whereas we believe the education received in the common schools has a profound influence on the development of the interest of the boys and girls of the country and,

Whereas we are of the opinion that the teaching, at least in most of the schools of Nova Scotia is not such as to educate the interests of pupils in the pursuit of farming,

Therefore be it resolved that we endorse such measures having this in view as to the establishment of the Rural Science School held at Truro and that,

We memoralize the council of public construction to consider the public school curriculum with a view to replacing some of the recent subjects taught in the rural school by compulsory courses in nature study and the principles of agriculture, and that,

We request the faculty of the Agricultural College to, in general, investigate the common school curriculum and in particular make recommendations in regard to giving the trend of education a more distinctly agricultural bias by endeavoring to secure additions to the school readers in use in the more advanced grades of well written articles from such writers as Agricola and other authorities on agriculture—such additions for the present to be in the nature of leaflets which could be placed in the school readers.

W. H. WOODWORTH,
A. C. BELL,
PROF. M. CUMMING,
REV. J. J. MACNELL.

Messrs. A. E. McMahon, A. S. McMillan and C. H. Black were appointed a committee to bring this matter before the Council of Public Instruction.

PROMOTION OF SHEEP RAISING INDUSTRY.

We, the committee appointed to consider the promotion of the seeep raising industry of Nova Scotia, beg to report and recommend as follows:

That this Association approach the Local Government through the medium of the local representatives of the county of Pictou and ask that the statute for the protection of sheep from dogs be amended as follows:

That all dogs be registered in the office of the clerk of the respective municipalities and that the owners of dogs be required to furnish each dog with a collar containing the municipal number of the same.

With regard to the promotion of the sheep industry, we recommend that, whereas the ragwort and other noxious weeds are alarmingly spreading in the eastern part of Nova Scotia and Cape Breton and it has been demonstrated, by experiments, made by the Department of Agriculture of the Dominion of Canada, that the ragwort has been the cause of the cattle disease of Pictou County and that sheep offer the most effective and practical means of eradicating this noxious weed, at the same time thriving thereon, and whereas we believe sheep to be among the most profitable stock on a farm and regarding, with apprehension, the diminuation of the sheep raising industry in this province and believing that the eastern part of Nova Scotia, as a whole, to be best adapted to sheep raising and being the area, at present, as most infected

(Continued on page 260)

HORTICULTURE

Lime-Sulphur vs. Bordeaux for Summer Spraying*

Before proceeding to the discussion of the value of lime-sulphur as a summer spray for apple and pear orchards let us first briefly call to mind the main fungous diseases of apple and pear orchards that require a summer treatment. In apple orchards the main one is clearly apple scab or black spot, as it is sometimes called. Less important diseases are the leaf spot and Baldwin spot. Black rot canker is a very serious disease attacking the trunk and branches but its main treatment must be before the buds burst; yet, as the summer treatment is also important we shall include it in our list. In pear orchards we shall only deal with pear scab, omitting the different kinds of leaf spot, because these are not often serious and lime-sulphur has not been tested on them. Pear blight, twig blight or fire blight, which are all the same disease, is not caused by a fungus and apparently cannot be controlled to any appreciable extent by spraying, so it is omitted.

In spraying for any of the above mentioned diseases it is clear that no mixture can be given a fair chance unless it is applied at the right time and in a thorough manner Hence a word or two about these points.

To prevent most fungous diseases the spray mixture must be applied before the disease gets any chance to make headway; in short, it should be applied early enough to prevent the spores getting a chance to germinate. Hence the date of the first application is usually of special importance. For apple scab the first spraying should be shortly before the blossoms open. If left until the blossoms fall the disease gets a great start for the first sign of it are on the leaves about the time of the opening of the first blossoms. The second spraying should be just after most of the blossoms have fallen, which is the proper time to spray for codling moth; the third, either two or three weeks later. Of these three applications the first and second are by far the most important and should never be omitted.

Leaf-spot and canker are controlled by the same sprayings as the scab, except that canker requires a special spring application in addition to these. It should be noted that leaf-spot is usually caused by the same fungus that causes the canker, namely, the black rot.

Baldwin spot. appears much later in the season and so requires separate treatment. The first spraying for it should be about July 1st and the second about two weeks later. It is seldom, however, that it is so severe in Ontario as to make spraying necessary.

Pear scab begins earlier than apple scab and so requires that the first spraying should be made just as the buds are ready to burst. The second application should be just before the blossoms open, the third at once after the blossoms have fallen and the fourth about three weeks later. The early first application seems to be necessary for even fair results.

We all know that it is not only necessary to spray at the right dates but also to do it thoroughly. Most of us who have done much spraying know that it is very seldom that a really thorough job is done. The trees are often only half sprayed. Perhaps this in a number of cases is due to the old motto: "Stop spraying just before the leaves begin to drip." This is not a safe motto and our first rule should be: "Make sure that every leaf and fruit is thoroughly covered;" and second, "try to do this with as little waste as possible." One cannot emphasize this thoroughness too much. No man deserves real good results without it nor indeed is he likely to get them.

BORDEAUX VS. LIME-SULPHUR.

Now let us pass to the mixture and the results. Bordeaux has for so long been the standard fungicide for all the above-named diseases of the orchard that it sounds almost startling to us at first to hear that it has a close rival in lime-sulphur. This wash either in the commercial or self-boiled form has been considerably experimented with in apple orchards as a summer wash especially the last two years. The results given are sufficiently good to show that it has much merit as a fungicide for apple diseases. They do not, however, show that it is a better fungicide than Bordeaux, so that those who "swear by Bordeaux" may still continue to do so.

SPRAYING FOR APPLE SCAB.

Taking up first the results upon apple scab: Prof. W. M. Scott, of Washington, D. C., and Dr. Brooks of New Hampshire Experiment Station have each made a good many careful tests of both the self-boiled and commercial lime-sulphur upon this disease. Each report the commercial wash as giving almost as good results as Bordeaux. The self-boiled in last year's experiments, (1908) did not give quite so good results although it showed a fair degree of merit. It was, however, made with cold water instead of hot, which would almost certainly have given better results. I have not seen the reports of this year's work (1909) but from Dr. Waite's remarks at the American Pomological Society convention held at St. Catharines, I infer that Professor Scott has been much pleased with the way the self-boiled mixture has also controlled the scab.

In experiments conducted by myself at Guelph this summer I sprayed eight fairly large Snow apple trees with the Vanco brand of commercial lime-sulphur. The west side received the three applications at the times mentioned above, the east side owing to my enforced absence had to go without the middle spraying. For the first application a strength of one to twenty-five was used. This burned the leaves slightly so one and forty was used for the other spraying and no injury resulted. The spraying was very thoroughly done. In September the fruit was examined and on the west side where three sprayings were given less than one per cent. of it was scabby; on the east where the important spraying just after the blossoms fell had to be omitted, nearly fifteen per cent. of the apples were scabby. The fruit moreover was free from russeting and the surface smooth and glossy. Similar results have been reported to me by correspondents. So that there is practically no doubt that lime-sulphur, especially commercial lime-sulphur, can control apple scab in a very satisfactory way, in fact just about as well as Bordeaux.

One point, however, has scarcely been sufficiently well tested yet, viz., whether or not as good results can be secured in wet seasons. The last two summers have been dry and have given the wash a good chance. It is almost certain that a soluble substance like commercia lime-sulphur would wash off more rapidly than Bordeaux. If so, its efficiency would be lessened unless an extra application were made.

PEAR SCAB.

On pear scab I have not got definate data from any experiments except my own. In the college orchard at Guelph there are six or seven Flemish Beauty trees near each other in three rows. Two trees in the middle row were chosen. The fruit and leaves of these were both very scabby last year. They were sprayed this summer at the proper dates mentioned above with Vanoc lime-sulphur. The first application was of the strength one to nine, the second was one to twenty-five, but as this burned the foliage considerably the other two were each made one to fifty. In September, when picked, the pears were absolutely free from scab as were also the leaves. All the surrounding trees which had received three applications of Bordeaux had consideroble scab on both the fruit and leaves. Probably if they had got the first application (the one omitted) they would also have been quite clean. However, the experiment showed clearly that commercial lime-sulphur would control pear scab even on Flemish Beauty trees.

LEAF SPOT.

As for leaf spot, Dr. Brooks has been making a close study of the cause and remedy for this disease. He finds that the regular sprayings with either Bordeaux or lime-sulphur will control it quite satisfactorily. This is valuable information because Professor Scott and Dr. Brooks have both demonstrated that the disease which causes most of these small round spots on the leaves is also the cause of the back rot canker, and so a wash that will control it in one form will also control it in any other. The leaf spot seldom does much damage to the leaves but its prevalence will help to spread the cankers, which are very serious and require special care. Therefore its control is of importance.

CANKERS.

There is not time here to discuss the proper method of treatment for cankers but as already said the first spraying must be in the spring before the buds burst as the spores spread very early and must not get a chance to germinate. Lime-sulphur of the regular home-boiled type has been well tested this year for the spring application and those who have used it think it vastly superior as a spring treatment to Bordeaux. The summer applications, as said above, should be the same as for apple scab, and either Bordeaux or lime-sulphur, preferably the commercial form, may be used. As the cankers occur on the trunks and branches these will require to be very carefully sprayed in the districts where cankers abound. Badly infested orchards treated in this way this year (1909) show no new infections and a great improvement in the health of the trees.

BALDWIN SPOT.

Tests made by Brooks showed that Baldwin spot could also be controlled by these forms of lime-sulphur or by Bordeaux if applied at the proper dates mentioned.

L. CAESAR.

Ontario Agricultural College, Guelph, in Canadian Horticulturist.

Hot Beds and Cold Farmers.

The best way to have early plants, such as cabbage, tomatoes, celery and lettuce, it is to start them in a hot bed. The hot bed may be easily and cheaply made and should have a place in every garden. For the hot bed make a frame four feet wide and as long as desired. This can be made of one by six-inch planks, nailed at corners and placed in the ground, the north side of the frame extending four inches and the south side two inches above the level of the ground.

Dig the pit two feet deep, taking pains to have the lower portion a little wider than the top. The heat is best genetrated by fresh horse manure, which is allowed to ferment. Put the manure in small heaps and keep it damp with water. Hot water will start fermentation quicker. Stir the manure heap frequently with a spade to start decomposition. When the manure begins to heat, put it into the pit, about 18 or 20 inches deep and tramp well. Cover this with about five inches of good garden soil. Put in a thermometer and when the temperature reaches about 85 degrees F. plant the seed.

The bed may be covered with ordinary glass sash for this purpose. It should, however, be left open in warm weather. When sash is not available, cloth will answer for a cover fairly well.

The cold frame is made like the hot bed, except that the former has no artificial heat. The cold frame is simply a

(Continued on page 255)

Apple Packing.

There is a great deal more to be learnt about the packing of apples than most people imagine. The apples of Nova Scotia are for the most part packed in barrels, but of late years there has been some attention paid to the packing of apples in boxes and it is to be hoped that this may be given more attention so that in a few years it will be the general rule to pack the best of the fruit in boxes. It would hardly be considered advisable, as yet, for the average fruit grower to pack his fruit in boxes. Only in cases where the grower has extra quality of dessert fruit would it be profitable to use the box. For the poorer stock and the varieties not used in the dessert trade, such as Ben Davis, Stark, etc., box packing is out of the question solely on account of the cost of package. Each box would cost about eighteen cents (18c) and as it takes about three boxes to equal a barrel there would be a cost of fifty-four cents (54c) against twenty-five cents (25c) the cost of a barrel.

PACKING IN BARRELS.

The minimum size of the standard barrel, containing 96 quarts, is as follows :

Inside measurements,
Between heads 26 1-2 inches,
Head diameter 17 "
Middle 18 1-2 "

A heavy plank should be provided for the barrels to stand on and upon which the racking can be done during the process of packing.

The barrel should be prepared for packing as follows:—The quarter hoops should be driven down firmly and three nails driven in and clinched on the inside. The face end of the barrel should be nailed and the packer's name and address, variety of apple and grade, whether No. 1, 2 or 3, stamped thereon. The fruit for the face should then be placed neatly in the barrel. The grade of the apples should be precisely the same in the face as in the rest of the barrel and there should not be the slightest attempt to get high colored or specially perfect fruit for the face Each apple is laid with the stem end down, the stem having been previously cut off with a stemmer. If the apples are well colored, the second layer should be placed so that the color of the apples will show through between the apples of the first layer, when the face end is opened. After the second layer is laid, the rest of the apples may be turned in from the baskets. The baskets should have swinging handles and be small enough to enable them to be let down into the barrel, thereby obviating the necessity of having to pour the apples in from the top, which is a great mistake, "practiced by some of the common packers," as it is apt to bruise the fruit. As each basketful of apples is placed in the barrel, the barrel should be shaken slightly, not sufficient to throw the apples against each other or against the sides of the barrel violently, but just enough to settle them into place. When the barrel is full to within two or three layers of the top, a round piece of plank (padded), slightly smaller than the head of the barrel, should be placed on the apples so that when the barrel is shaken, the fruit will be prevented from jumping out. In tailing, the apples may be placed with either the stem or the blow end uppermost. The aim in tailing the barrel is to have equal pressure upon every apple in the last row. It is advisable to use paper heads at both ends of the barrel. The exact pressure which must be given will depend somewhat upon the variety of the apple; if they are packed for storage or for a short trip, then the pressure need not be so very heavy, but if they are packed for export, it will be necessary to press them quite heavily, but care must be taken not to break the skin of any particular specimen.

Such apples as the Spy have to be pressed very moderately, as the apple splits and bruises readily under pressure; Russets, on the contrary, will stand much heavier pressure, without breaking the skin, which is very convenient, as they require a heavy pressure to prevent slackness from evaporation.

BOX PACKING.

The size of the Canadian apple box is 10x11x20 in., inside measurement. It is recommended that the box should be made from the following specification:—The end pieces not less than 5-8

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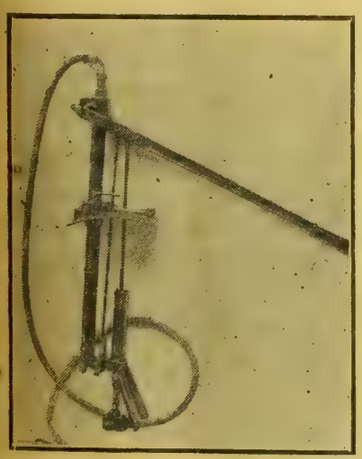

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R. B. Westhaver, Mahone Bay, N. S.

inch nor more than 3-4 inch thick. The sides not less than 3-8 inch, the top and bottom ½ inch or a little less would be better. These dimensions cannot be changed to any great extent. The best available variety of wood for the covers is probably White Spruce, but many different kinds may be used for the ends and sides. The proper nails to be used are four-penny rosined nails. Cleats should be used on top and bottom.

Whether the apples should be wrapped in paper or not depends somewhat upon the variety and the grade of the fruit. Wrapping has several advantages.

1. It serves as a cushion in the case of delicate fruit.
2. It prevents rot and fungus diseases from spreading from specimen to specimen.
3. It maintains a more even temperature in the fruit.
4. It gives a somewhat more finished appearance when the fruit is exposed for sale.

Wrapping has also some disadvantages.

1. It adds to the cost of packing.
2. It prevents rapid cooling in cases where the fruit is not cool at the time of packing.

Double wrapping and the use of waxed paper is of use where extraordinary precautions are needed to preserve the fruit. The boxes should be lined with cheap paper. The paper to be 19x26. Two sheets for each box.

A permanent packing house is almost an absolute necessity for the best work in box packing, or even barrel packing.

In all packing houses there should be ample ventilation in order to cool the building off during the night time.

It is more convenient to have two tables for box packing :—1st table for grading; 2nd table for packing.

The simplest method of box packing is the barrel pack, which is to place the bottom row and dump the rest in. This method is not to be recommended.

In a general way, the size of the apples is indicated by the number of tiers in the box. If three layers will fill the box properly, it would be called a 3 tier apple. In the same way if 5 tiers fill the box, the size is said to be 5 tier. If the apples of one layer are placed in the spaces between the apples of the tier below, there would be, say, 4 layers of apples, intermediate in size, between those that would fill the box in three layers or in four layers, if packed directly over each other or straight pack. Such intermediate size would be styled a 3 1-2 tier size.

A very useful diagonal pack for the 3 1-2 tier size is made by placing three apples in the first row, one in each corner and one in the middle. The second would then be made with two apples, third with three and so on, until the tier is completed. The second layer would be commenced with two apples, third layer with three and so on, as in the first layer. The packer should never attempt to fill a space with an apple smaller than the rest of the apples in the box. If there is a small space left, it can be assumed that he has chosen the wrong pack. A beginner will find it necessary to try different packs until he obtains the correct one. He may try his pack in one end of the box, instead of using the whole box. The art of box packing can only be learned by practice. I might mention here that the packing table should be well padded and the apples dumped onto the table as carefully as possible, so as not to bruise them.

In putting the cover on the box, nail one end of the cover first, then press the other end down and nail that. It is found advisable to place the apples so that the ends are lower than the middle, this gives a swell to the cover and bottom. A swell of about one inch or an inch and a half is advisable.

The box, after being nailed, should be marked with name and address of packer; kind of fruit, grade, number of tiers, number of apples, whether well colored or not and also a number or mark indicating the packer.—ANDREW W. THOMSON, Berwick, N. S., in Maritime Students' Agriculturist.

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Thousands of dollars are lost each year through lightning. Yet the farmers of Canada need never lose another cent from this cause if they will roof their buildings with PRESTON Safe-Lock Shingles—the ONLY roofing GUARANTEED proof against lightning.

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How to Make Good Butter.

Mrs. Andrew Thompson, one of the prize winning exhibitors of dairy butter at the last Canadian National Exhibition relates her butter making method in a recent issue of the Ottawa Valley Journal:

"One of the principle things to be considered in the making of good butter is cleanliness in everything, from the stable to the package in which it is shipped; all dairy utensils should be well washed, scalded and aired every time they are used, milk should be removed from stable as soon as possible, and separated at once. We generally keep from eight to ten cows, and until a little more than a year ago raised the cream by the deep can system and ice, and as we had always been very fortunate in winning prizes, and having first class butter, wouldn't have a cream separator, but now after using one, wouldn't on any account go back to the old way, it is so much easier, can make more butter, and just as good as by the old system.

"We always milk in stable, both summer and winter; have the separator in the out-house near by, and as soon as cream is separated, cool it down as quickly as possible, by putting the cream pail into a large vessel containing ice, stirring occasionally, and never on any account add the fresh cream to that already gathered until ice cold. In summer if cream is not cold enough, we set the cream in a galvanized tub containing ice the night before we churn. Of course it is trouble taking ice to cellar, and again removing the water, but to have first-class butter you have to take trouble, and it pays I may say I have made butter for a great number of years, and never had a pound of poor butter.

"We scald the churn the night before, in the morning rinse with cold water, and then strain the cream into churn, adding coloring if necessary. All last summer we churned at a temperature of 52 degrees, no higher, and the butter generally came in 35 or 45 minutes. Wouldn't like it to come any sooner. As soon as butter breaks, add a small quantity of ice cold water, and when churned enough, draw off buttermilk. We then rinse lid, sides of churn and butter off with ice cold water, and find that by doing so, one washing will be sufficient to remove all butter-milk in summer. I sometimes add a handful of salt to the wash water, turn the churn very rapidly for a few times and then drain the water off, remove butter into the butter-worker, sifting on the salt, allowing one ounce to every lb. for crocks or tubs, and 3-4 oz. for rolls. For Toronto Exhibition we are just allowed to put 1-2 an ounce to lb. for tubs, which is not enough. It would taste much nicer, and I am sure suit the taste of most people better if more were added. Of course, good salt is of great importance, there are many good brands of salt, but we always use the Windsor Dairy Salt.

"When working butter, great care must be taken not to work too much, as it spoils the grain, which makes it appear greasy; we never work it more than once. I have seen two workings recommended, but with experience one working is sufficient. I suppose an inexperienced person would have streaked or mottled butter, so in that case two workings would be necessary."

"Just now in cold weather, we cool the cream just the same as in summer, always stirring well when it is added to the cream already gathered. We always add a small quantity of fresh butter-milk to the cream gathering for the next churning, and if I think the butter-milk is getting a little bitter, of off flavor, make a fresh starter from fresh sweet milk, churn twice a week, and day before, heat the cream up to 68 degrees by setting can in warm water, next morning it will be ripe or sour enough, and cooled down to about 62 degrees which is about the ripe temperature for churning winter butter; of course, rich cream can be churned much lower than thin. You cannot learn everything about the making of butter by reading; you need experience and a certain amount of good common sense."

Different Breeds of Cows for Different Purposes. Value of Adaptation.

Near where I live there is a large milk condensary just starting into operation. This is something new here and there is considerable interest manifest among the farmers as to the value of the milk of the different breeds of cows for this purpose, as there is no difference in prices paid, the only requirement being that the milk shall be in clean, wholesome condition and come up to the standard of four per cent butter fat, the same as required by dealers in milk for the city trade.

Not all breeds are alike as regards the amount of butterfat contained in the milk, there being much difference in some of them. For instance the Jerseys and Guernseys excel in richness of milk and its high color while that of the Holsteins would be lower in butterfat but larger in amount.

It has been stated by those engaged in the condensing business that, of the principal breeds, the Holsteins stood in the lead, giving a large yield of milk and nearest to the composition considered the most profitable for the disposition that is to be made of it. It will also stand carrying quite long distances, as is often required, better than that of the Jerseys which would be another argument in favor of the Holstein for this purpose.

The Ayrshire is a good all around cow—that is, will give a good yield of milk of average quality for butter, cheese or for sale in the markets and bears transportation well. It would probably rank next to the Holsteins in value for the condensary or might equal it.

Where the condensary is to be patronized it will be found more profitable to select or breed cows from the large milk producing kinds, where the butterfat and milk solids are in the nearest proportion to what is wanted. This is advised and will probably be followed by those interested in the matter.

It would not pay a farmer, having a herd yielding milk rich in butterfat, to dispose of it to a condensary, but it would be just the kind or quality wanted for the cream or fine butter. This condensing business has set farmers to studying and testing a little on their own account in order to find out what the results might be in changing from a creamery to a condensary, for instance, which is certainly commendable.

Two farmers in a near-by town, one having Holsteins and the other Jerseys, on their grades, and who had both been patronizing the same creamery, where sweet pasteurized cream was made a specialty for the city markets and good prices were paid for both milk and cream, weighed the milk from their herds for one week, thus finding what its value would be if delivered at the condensary at the price then paid. The one having the Holsteins, forty-four in number, found that he would have received $5 00 more for his milk if it had been sold at the condensary. But in this case there would be no skimmed milk left upon the farm, which must be considered.

The other farmer with his thirty-three Jerseys found that he would have lost $5.00 by selling to the condensary, and and would not have the skimmilk at home. The last would, considering this a reliable test, do better to continue along wiih the creamery, while the other might find an advantage in selling to the condensary, but it would be rather slight, taking everything into consideration.

This is a matter that should be more fully understood by dairymen. They seould select the breed or kinds of cows that experience proves to be the best adapted to the disposition that is to be made of milk, whether to be sold as such in the city markets, or as cream, butter or cheese, or for the condensary. These are all necessary methods for its disposition and endeavoring, as all farmers should, to get the most possible from their dairies, they should seek for the "best way" with the utmost carefulness, and then having made their decision, stick to it with a firm purpose, a purpose that will bring its own reward along with it.

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Franklin County, Vt.

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Streaked Butter.

It is not uncommon to find butter carrying streaks of lighter and darker shades of color, even when no coloring matter is used in the making. This wavy appearance when the butter is cut down is very objectionable even to those who know how it is brought about, and much more so to the user who knows nothing of its cause. This wavy or streaked appearance is caused wholly by an uneven salting of the mass. Salt serves to increase or bring out the color of the butter, and after it is added if the mass is not thoroughly worked or commingled so that all parts will be evenly salted, it will show white streaks. This in no respect detracts from the quality other than appearance. This, however, is enough to make it objectionable, for it is a point of merit to have the butter show an even shade of color when cut down. Where it does not it is wholly due to the maker, and not to any defect or impurity of the milk or cream from which it was made.

Losses in Butter Making.

More or less loss of the solid material ensues in handling milk for the making of butter. This is shown by the fact that the sum of the solid ingredients found in the products (butter, skim and butter milk and slops) does not equal the amount in the whole milk used. This loss falls almost entirely on the fat. The casein and albumen, milk sugar and ash in the products check fairly well with those in the original milk, but the fat does not. This loss of fat is inversely proportional to the amount of milk used and to the care taken in its handling, decreasing relatively with increased volumn of milk handled with greater care. The loss is a purely mechanical one, due to the greater viscosity of cream as prepared to skim-milk. If the cause were chemical or biological as great proportional destruction would ensue with large as with small lots of milk. The mechanical losses in 22 days' survey of the operation of a small creamery approximated 0.9 per cent.

When a Cow Should be Dried.

There are few subjects connected with cattle management on which there is more difference of opinion than the period during which the cow should be dry. It may be taken that there is a general agreement among farmers and dairymen as to the desirability of allowing a cow a period of rest by drying off the milk secretion during the closing days of gestation, but the question is, for how long before its completion? As a general thing, it is the man who has had the least to do with dairy cattle who advocates the longest rest, but, within reason, the cow should be milked as long as possible, and especially is this the case with the young cow or or heifer with her first calf. This is called inculcating the milking habit, and experience goes to show that as the cow is treated one year she expects to be treated again. Furthermore, the cow-keeper owes it as a duty to himself to get the greatest amount of work out of his milking machine in the least possible time and at the mimimum of cost, for in these days it does not pay a man to have idle stock about him.

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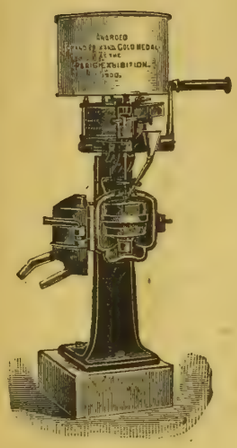

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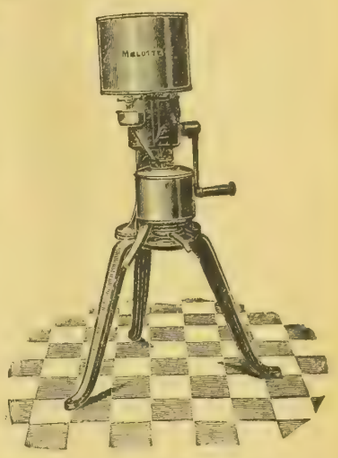

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The cow herself has a great deal more to do with it than is generally realized, and the period has to vary with the animal and the particular circumstances of the case. Thus, absolutely hard and fast rules are impossible. A rest from milk secretion is, of course, for the benefit of the cow, of her prospective offspring, and, I believe, of the milk yield after the production of the calf, for it is certainly not in accordance with the arrangements of nature for a female to be always producing milk, and continued secretion must be a terrific drain on her system where no opportunity is allowed for recruiting.

In the case of the poor milker, which, in these days of high pressure and keen competition, no one should keep as a dairy animal, there is no difficulty about fixing the period during which she should be dry; she simply goes dry herself, generally a deal too soon for her owner; and some will take as much as three months' rest, or yield in response to persistent dragging and generous feeding a quantity of milk that does not pay expenses. The short and best way with animals of this class is to weed them out, for they are quite out of place in the modern dairy.

A cow in poor condition may be allowed two months in which to recruit her strength with advantage to herself and her prospective calf, but this is to some extent a matter of keep. If the animal is in a healthy condition, and the quantity of milk produced pays expenses there is no reason why the period of rest should not be further reduced, and milking can be continued until within a month of calving. If a cow is in a low condition, it is better, in my opinion, to resort to higher feeding than to dry off. I have known cows traeted thus for many years sometimes being milked to within a month of calving that have carried as good an appearance and produced equally good calves as those which run dry nearly three times as long. Six weeks may be considered the average period during which a cow should be dry, unless the circumstances are exceptional.

It is, however, the extraordinary milker that occasions the greatest difficulty to the dairyman fortunate enough to possess her, both as to the policy of her dying at all, and if it is decided that this is necessary or desirable, in the matter of the way in which the secretion is to be stopped without incurring great risk of injury to the udder, and possible loss of secretive function in parts of the gland structure.

There are some deep milkers that are the despair of their owners, who would often enough be willing to accord them a reasonable period of rest if there was a posibility of drying them off without having to take considerable trouble and running a great risk. For these there seems nothing but "milking round," as it is called, and I am bound to admit, much as I prefer a moderate rest, that so far as immediate consequences are concerned, the animals do not appear any the worse for it, nor is the milk yield after calving materially affected This last named point is perhaps difficult to determine because it is not possible to say, although the cow milks splendidly, of what she would have been capable had it been possible to accord her a months' rest

This much, however, seems certain, the risk of causing garget or inflammation of the udder and the possible loss of one or more quarters is too grave to be lightly incurred and in such cases the practice of "milking round" is quite justifiable.

In the case of heifers, they should never be permitted to go dry early, or the habit of ceasing the supply early may be perpetuated. This class of animals should be kept in milk even when the yield falls below a profitable quantity, for it is by persistently asking for more that the qualities of prolonged lactation have been developed in the cow. Needless to say, the animals should be well fed. W.H. UNDERWOOD.

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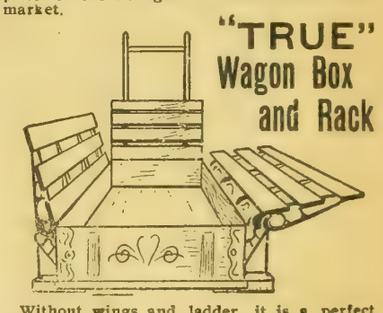

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LIVE STOCK.

Rearing of Calves.

EDITOR MARITIME FARMER.

A problem which troubles many farmers and dairymen is that of raising their calves successfully. They may be raised on whole milk, on the cow, on skim milk, and with no milk at all. The most practical and cheapest way is to raise them on skim milk. Of course skim milk must be supplemented by other feeds to replace in a measure the fat removed by skimming. Good feeds are oil meal, oats, corn, bran, gluten, or wheat. A more desirable feed is a mixture of all or some of these to form meal with a nutritive ratio of 1:5. A liberal supply of good hay should be kept before the calves. This is the first thing they learn to eat. Perhaps the best is early cut or second crop clover hay. All hay should be fine. Some bone meal should be supplied to furnish mineral matter. Bone meal is indispensable to cattle in the barn all winter. The calves should also have salt at all times. Salting at intervals sometimes causes overdrinking and consequent scours.

Calves over a week old should have all the pure water they want after they have had their milk.

PAILS AND MANGERS.

The pails in which the calves are fed should be kept perfectly clean, thus killing all germs and bacteria which would be apt to cause disease. Their feed boxes should be clean and sweet.

STALLS.

The stalls and pens should be clean and dry and well bedded. It is a good plan to sprinkle the floor with land plaster. This will correct the odors and absorb moisture. If possible have the pen where the sun will shine in it. Sunshine is a great destroyer of germs. The pens should also be disinfected with some good disinfectant. Do all you can to prevent disease or disorders of the calf. A calf is very hard to treat successfully.

CARE OF DAM.

The care of a calf should begin when it is still unborn. The mother should have laxative food just before calving. Bran, oil meal or wheat are good, because they are stimulating as well as laxative. When about to calve, a cow should be placed in a box stall alone and be left perfectly quiet. Never disturb a cow by trying to help her as a cow rarely needs help. Give her plenty of time, especially a heifer. Darken the stall if possible.

THE CALF SHOULD BE WITH MOTHER.

The calf should be left with the cow for a day or so. If the calf is small or weak, leave it a long time. Under any circumstances it should get the colostrum. This is practically rich in albuminoids and is of much benefit to a new born calf.

But the longer a calf remains with its mother the harder it is to teach it to drink and the more it feels the change from sucking to hand feeding. When the cow is taken out and placed in her stall, the calf should be left undisturbed for from twelve to twenty-four hours. It should be left till it is very hungry. It does not pay to waste time with a calf when it is not hungry, for it spoils the calf and the temper of the teacher. When the calf will suck the fingers, take three pounds of milk. Have it very warm for the process of teaching the calf to drink cools it.

TEACHING CALF TO DRINK.

Back the calf up in a corner and, placing one knee against the body to keep the calf from escaping, place two fingers in its mouth, gradually lowering them until the calf's mouth is in the milk. Allow the milk to be sucked up between the fingers. While the calf is busy withdraw the fingers. Some calves will keep right on sucking and thus drink alone. Some, however, will need a few lessons before drinking alone. Do not lose patience with the calf and bat it on the head. Handle it very gently and it will have confidence in you, and it will come to you voluntarily instead of seeking a hole when you approach.

FIRST WEEK'S FEED. SCOURS.

The first week the calf may get six to eight pounds of its mother's milk. Always feed at a temperature of about 90 to 100 degrees. A variation will cause scours. And never make the mistake of overfeeding. This is a very easy thing to do and is the cause of many calves' death.

SECOND WEEK'S FEED.

The second week the calf may be fed a little hay. Hay being the first thing a calf will eat, the calf should have it young. The milk need not be increased until the second week. As soon as the calf will eat it, which is about a month, it should have meal to eat. Give it all it will eat, as at this age it will not over eat.

THE THIRD AND FOURTH WEEK'S FEED.

The third or fourth week the change may be made from whole to skim milk. This is the critical time, so the calf should be watched closely. Frst take away a pound of whole milk and add a pound of skim. Change a pound about every two days until the change is complete. At the first sign of scours, cut down the milk and heat it up to 120 degrees and add a little water. This will stop the disease and is very simple. Under no cirumstances allow the calf to struggle along with scours.

SKIM MILK FEEDING.

When the change is complete the calf may get twelve pounds of skim milk and two pounds of grain, also all the hay it will eat. Increase the milk two pounds a week until the calf gets about eighteen to twenty pounds. Do not feed more than this. It will make a scrawny pot-belly with no lung capacity. When a calf gets large enough to use more than twenty pounds of milk it will be too large to make the most profit out of it.

At six months the calf may get less milk, say two pounds a week, until it gets none. Give plenty of good hay and grain and a little silage may be fed. Do not get it fat and thus give a tendency to lay on flesh. Be sure to give the calf plenty of those two great necessities of life—salt and water.

In closing I will say, little calves are like children. Early learned habits are remembered and if you spoil your heifer, you will have a spoiled cow. Never abuse calves, but make pets of them; let them have confidence in you. Learn the little calves properly and you will have a herd that will be a source of satisfaction and revenue to you.

R. C.
Pictou Co., N. S.

A Great Lhmbing Record.

"I own a small flock of Shropshires containing 34 breeding ewes, descended largely from pure bred ewes raised in Eastern Ohio, but having a small per cent of blood direct from the Peter Everall flock, of England.

"Of the 34 ewes, 31 have lambed up to date, and 26 of the 31 have produced twins, so the 31 ewes have given me 57 lambs (27 ewes and 30 rams), I have never before counted on more than a pair of twins for every alternate ewe, and there has been no special selection of mothers that were twins or in selecting a twin ram for flock header. I have paid no attention as to their being or not being twins or the sons of twins. The flock is at present headed by a ram imported from Canada, a son of "Corston Lad," who headed the flock of Hon. John Dryden, and was bred in the Butter flock, of Scotland. I am quite at a loss to account for the large proportion of twins, and would like very much if someone who is an expert on sheep breeding will tell me what there might be in the conditions to account for it.

"Last fall, owing to the continued drouth, what pasture there was seemed to be wonderfully nutritious, but because there was not enough to be gotten by grazing, the sheep were fed on clover hay ever since September. The ewes during the fall were no fatter or better conditioned than in other seasons. During the winter they were fed corn fodder at morning and noon and clover hay at night, together with about three gallons of corn and oats mixed in equal parts morning and night. All have had constant access to salt mixed with tobacco dust, five measures of salt to one dust.

"I am not overly anxious to repeat the experience next year, as I would rather have, as a rule, one large lamb than two medium sized ones, as not all ewes furnish milk enough, even if well fed, to keep a pair of twins growing rapidly all summer. But I want to know the philosophy of such an unusual per cent of twins. Kindly tell me if this record has ever been beaten by any flock of full-blood Shropshires anywhere on earth, so far as you know."

The foregoing article by Stephen O. Young in a recent issue of the American Sheep Breeder, was replied to as follows by the editot of that paper and may contain a beneficial hint for some of our Maritime Province sheep men.

"Mr. Young's percentage of twins is very large, the surprising feature being the large proportion of twins with no mention of triplets or quartets, which quite often come in a prolific lambing, adding greatly to the percentage of lambs to the number of ewes bred. The heavy percentages of twins and the excessive total percentages of the number of ewes bred nearly always come to the

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HEALTH, WEALTH, AND WORK.

So long as Nature's laws require that mankind shall work, the necessity of keeping one's self in health and strength is of first importance. Many people believe that men of great wealth do nothing. That is a mistaken idea. They may not work with hammers or shovels, but they work with their nerves, brains and minds. Scores of millionaires have worked themselves into nervous prostration in their efforts to control, *to avoid losing*, their millions. But it is the humble workers who suffer most.

Mr. Arvez Berten, of Robertville, Gloucester Co., N.B., is a sturdy man of 65, who works in the lumbering districts in winter, and who, therefore, must have good health. Some years ago, he suffered much from Dyspepsia, with headaches, dizziness and rheumatism. In a statement, dated June 24th, '09, he says he used only Mother Seigel's Syrup and four bottles cured him completely.

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small flocks running from six or eight up to twenty-five ewes. The smallness of the flock usually leading to better sanitary conditions, higher thrift, better health and a nearer approach to the normal.

"The first flock of Shropshires ever seen by the writer numbered eight ewes, which had delivered recently twenty-one lambs, eighteen of which were still alive and well on their feet. Four of the ewes had borne twins, three of them triplets and the other a quartet of lambs. What a startling percentage of lambs! Almost 300 per cent. These lambs came a deluge, without any known pernatal influence to account for the deluge. This happened in Saline Co., Mo., the garden spot of the that good old state. The following year, in the same state, the writer saw a flock of Cotswold ewes, numbering perhaps half a hundred, that had been built up by selection, only twin ewes and rams being used for several years in the matings, with the result that the owner rarely failed of a 200 per cent lamb crop, and these nearly always twins.

"The results were natural and, of course logical, because they has been systematically bred for. In the case of Mr. Young's 26 pairs of twins out of 31 ewes lambed, there is no philosophy that can account for the big percentage of twins, and the best we can do is simply to say it "just happened so." We may guess the rich fall pasturage previous to mating time had much to do with the generous conception, and the later balanced winter feeding contributed to the surprising results. It is all beyond the philosopher's ken or the chemists analysis. We cannot say that Mr. Young has broken all records of Shropshire lambings anywhere in the world for we have published small flock lambing records in excess of 200 per cent totals, though we are not as sure as to the percentage of twins. Cannot something be done to avoid excessive lambings? asks Mr. Young Yes; no trouble about that. Starvation at mating time and subsequent neglect will do it every time, and from having too many, the road is short to where you will have too few.

Hog Notes.

The man who always feeds well in flush as well as hard times is the one that wins in the end.

If a pig is not going forwards, he is losing the owner money; when he is just holding his own he is losing money.

The later the spring litters come the less care is required to start them, but the opposite is true of fall litters.

There is no profit in keeping the pig or any other animal when there is no gain.

An abundance of good feed mixed with a good deal of care and attention will make a young pig thrive amazingly.

The boar will thrive much better if given good range and exercise, will have more vigor, will sire pigs with stronger vitality, and the litters will be larger in number.

The compact sow is objectionable because she cannot assimilate sufficient food to maintain a large litter.

For market the great point is to get a lot of hogs as even as possible, and of moderately heavy weight, and at the same time neat and fine.

No cast iron rule can be held down as to the exact size at which swine can be sold to the best advantage, but it is always safe to have them just as good as possible.

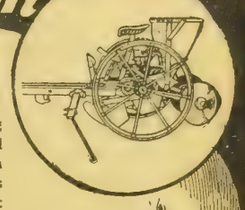
Pigs should never be fed so much as to be indifferent about their feed, or so that they will leave any; but feed all that they will eat clean and keep them so that they will always come to their feed with good appetites.

The first hundred pounds put on a pig costs less than the second, the second less than the third, and every additional hundred costs more than the preceding. Keep the pigs growing from the day they are farrowed and market as soon as ready.

RED ROSE TEA.

"Is Good Tea".

Only requires 1 man



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Good Dealers desired in unoccupied Canadian Territory.

THE HORSE.

Azoturia.

Azoturia is a disease occurring in the most serviceable horses—those that are doing the hardest work, and often in those having the best appetites and in good condition.

It is a very common disease and yet one with which horse owners in general are not familiar. Englishmen sometimes call it "Monday morning disease," because of its frequent occurrence on the first working day of the week.

Practically the same symptoms accompany every attack of azoturia. An animal has been doing steady, hard work, either driving, plowing, or hauling heavy loads; it has been well fed and cared for; because of a storm a breakdown, or a holiday, there has been a day of rest. The feed, especially the grain, has been given in the usual quantity, and often increased, the owner taking advantage of the rest, and hoping by doing this to add more flesh to his horse.

The following morning the horse feels exceptionally well, and for a fraction of a mile is very high-spirited; by this time it will probably become lame in one hind limb, breaking out in a profuse sweat, trembling at though in a chill, and beginning to show signs of fatigue. If he urinates at this time, the water will be coffee-colored and very thick, like syrup. If a driver is familiar with azoturia, these symptoms should be sufficient for him to recognize the trouble; but, too frequently, this condition is unnoticed, or unheeded, and the animal is driven until both quarters are involved and it falls in the harness. Of course some attacks may vary from the one just described and the symptoms become changed as different groups of muscles are involved, but the history will invariably fit this outline.

Azoturia is one of the numerous diseases that result from the improper care of horses. It occurs from an attempt to take too good care rather than the usual fault of neglect.

The observance of a few simple rules should prevent the occurrence of the disease, unless in exceptional cases, and in these the fatality can be decidedly reduced if recognized at the beginning of an attack.

The most important factor in the prevention of azoturia is the item of feeding. A very good practice carried out by a great many stable men in the cities, especially those in charge of large numbers of work horses, is to feed, on Saturday night, bran mashes and the ordinary feed of hay only. Sunday the feeds are just as regular as usual, but are cut just one-half.

Horses should not stand in the stall all day Sunday. but should receive a good grooming and be turned out to roll and exercise at will. The man on the farm always has this advantage, while the city man is usually crowded for room.

As soon as an animal is believed to be suffering from azoturia, it should be unharnessed and covered with blankets. Except in extremely cold weather, the horse should not be moved, but should be allowed to stand and sweat so as to eliminate as much of the waste products as possible. It is advisable in an hour or two slowly to lead the animal to the nearest place of shelter and there to have it treated for a day or so before attempting to take it home.

With as good a start as this a veterinarian should be able to save more than ninety per cent. of his azoturia patients, while, as conditions now exist, he is fortunate if he saves more than twenty-five or thirty per cent.—H. E. Kingman, Colorado Agricultural College, Fort Collins.

Brood Mares in Winter.

EDITOR MARITIME FARMER :—

The foal crop is an important one and if prices for horses continue to advance, as they have done for the last ten years, it will be still more important that the number of good brood mares be increased and be treated in such a way as to bring forth healthy offspring.

It would be interesting, and doubtless, at the same time appalling, to learn what proportion of foals are lost each year. Unfortunately, too, it is the better class of mares that more frequently lose their foals, largely because of the too generous treatment given them. As a rule, the cheaper class of mares are allowed to rough it and no doubt this has much to do with the high percentage of smart foals produced by them.

Opinions differ among horsemen as to the best way of managing the brood mares during the winter season. Some believe in giving them the run of the lot, with shed shelter, and allowing them to be completely idle. This has been a very common practice among the breeders of pure bred stock, either of the driving or draft class. Their chief object, of course, is to get a foal. They consider that in following this practice, they were doing what was best for the health of the mare. It has been found, however, that light labor is not only more conductive to the thrift of the mare during this season, but it is also more favorable to securing strong and vigorous foals. Consequently, on the ordinary farm, where a few mares are kept, and these lightly worked, we find that the mortality from weakness in foals is less than it is at many breeding establishments, where every care is taken to add to the comfort of the mare.

Of course, where large bands of brood mares are kept, it is impossible to work them all, but on the ordinary farm, where a few are kept, it is the best management to give them.

There are some things to especially guard against in the case of brood mares, whether they are worked or allowed to run at large. One of the most common sources of trouble is due to their slipping on ice. This is a matter which can hardly be prevented, unless extra care is taken to guard against it while they are at work or by seeing that such places do not exist in the yard. Where a band of mares are allowed to run together, another very fertile source of trouble is from one or two among them, of mean disposition, that continually annoy the others and finally give expression to their viciousness by kicking. This very often not only results in permanent injury, but frequently produces a deformed or dead foal.

Such mares, in some way, should be kept from the others. The approaches to stable doors are frequently another cause of trouble. They are, sometimes, too steep and may have become worn, so as to afford very insecure footing and unless special attention is drawn to it, one is likely to consider it too small a matter to be immediately attended to. Where the mares run loose, it frequently occurs that they crowd each other in the doorway, and because of this, become hipped or injured in a less serious way.

As the time of foaling approaches, there is no more satisfactory arrangement made to have a dry, well bedded box stall for the use of the brood mare. Some think it is better for the mare to foal in the pasture, but colts have been known to permanently injure themselves by being allowed too much liberty just at this time. When they get on their legs and become sufficiently strong to stand and walk a little, they are likely to overdo it, but if confined in a box stall, there is less danger. To prevent anything of this kind occurring in a box stall, it is necessary to see that it is dry and well bedded, for if it is slippery and damp, and the foal endeavors to get its feet, it may strain itself so as to result in permanent injury. It is also very necessary that the quarters should be dry, because it has been quite definitely determined that joint troubles in colts are largely due to the infection of the nayal cord in filthy quarters.—WALTER S. COGSWELL.

Let Poultry Keeping Stand on its Own Merits.

EDITOR MARITIME FARMER :

While I appreciate the continual improvement in your paper and consider the issue of Jan. 25th as superior to any of the many good ones I had the benefit and pleasure of reading, the many valuable suggestions in the editorials, as well as those in the various communications, make them too numerous to mention separately.

And believing you desire to improve agriculture, as a whole, I take the liberty of objecting to a statement made in the article, "The Poultry Industry in Canada," where it says "a farmer does not begrudge summering two or three colts and selling at a loss of twenty to thirty dollars, &c." Such is not the case, as most farmers do object to summering or wintering horses or other stock at a loss and occasionally a capable horse manager may loose money on a horse, but that is the case with other classes of farm animals and poultry also. Now, what I object to is the all too common practice of some speakers of advocating one product and making disparaging reference to others just as profitable. There is room for all, and almost all over Canada the horse is necessary for the profitable production of any of the others, excepting honey. And if we leave the farm and look to the city or town, we find more money invested in securing, equiping and maintaining horses for pleasure than any, if not all, domestic animals. And, if a horse is a pleasure to the city dweller, it is the same to a farmer and his family, as well as a part of his necessary equipment. The statement was made lately, by a high authority, that the question before the people is, how can rural life be made attractive? The horse aids in solving that problem, so their production should not be disparaged or made skeptical, because an unfortunate producer suffered a loss, such not being the general condition, as the Canadian province, having the most money per capital on deposit in the banks, has long been famed for producing good horses.

And surely poultry is important enough to maintain its self on its value, without discrediting anything else. For instance, it could be said losses have occurred in poultry production and give the causes and remedy without trying to justify such losses, because a man, through some misfortune, lost twenty or thirty dollars or two or three colts and then proceed to quote price of eggs at 60 to 70 cents per dozen and chickens proportionally high priced. That should show the possibilities of the poultry industry and the necessity of good horses to provide food for the poultry, as well as an animal to assist the poultry men to enjoy their great wealth.

J. STANDISH, V. S.

HORSEMEN ATTENTION!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. They cure Cough, Cold, Distemper, Colic, Glanders, Spavin, Pink Eye and all diseases of the Horse.

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Dear Sirs,—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months standing. In my large experience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends.
E. J. ANDERSON.

DEAR SIRS,— BEAR RIVER, N. S.

We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it.
Yours truly,
CLARKE BROS.

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POULTRY.

The Principles and Practice of Poultry Breeding.

Selection is the key to successful and satisfactory breeding of poultry. In order to make proper selections, in breeding domestic fowls for his purposes, the poultryman should have a thorough understanding of the underlying facts and exercise his brain powers to the fullest extent possible. His knowledge should extend to all of the influences and conditions affecting the breeding of the birds.

THE FACTORS IN POULTRY BREEDING.

The numerous influences involved in the propagating of fowls may all be included in three groups: first those relating to Inheritance; second, those which constitute Environment; third, those which are the result of Exercise of Functions.

1. Inheritance or Heredity includes all the powers, qualities and characteristics which the parents transmit to the offspring through the germ-cell of the egg. The germ-cell in a hen's egg is easily observed if one will gently make an opening through the shell, about midway on one side of the egg, and then hold the egg with this opening uppermost. The yolk of the egg floats to the top and carries, imbedded in its upper surface, a whitish circular spot about one-eighth of an inch in diameter. This spot is the germ-cell, which in a fertile egg, subjected to the influences of incubation, develops as an embryo and, if all goes well, hatches into a live chick Wonderful indeed is the working of this law of life, which insures the conveyance of the combined or mingled qualities of the hen that laid the egg and of the male bird that mated with her, to the little chick hatched from the egg.

This powerful influence of inheritance extends to the size and shape of body and of the different body-parts, to the coloration of the feathers, to the capabilities of the digestive system, to the capacity of the breathing apparatus, to the heart-development, to the quality of the bones and muscles, to the keenness of vision, to the texture of the comb and wattles, to the foldings of the brain. It affects the new creature's bodily strength or weakness, its possible length of life, its breeding powers (egg-production) and even the chicken's disposition and habits. Unfortunately poor or bad qualities are inherited as readily as good ones.

Disease is not directly transmitted but conditions inviting or favoring the development of disease-germs in the body may be inherted. For example the bird which has by inheritance, weak lungs or poor digestive powers is very likely to succumb to disease attacking these parts of the body at some period in its life.

This hereditary influence of the parents haf much to do with the start in life not only of the fowls but also of the poultryman himself, for these facts apply to the human family as well as to our feathered pets.

The laws of inheritance hold the animal kingdom to an orderly, systematic development and procession. The poultryman is thereby assured of regularity in the results of his matings of fine fowls. The eggs of these birds will certainly produce their kind and not hatch into sheep or swine or snakes. Nature is not fickle and as a rule she forbids the formation of freaks.

2. Environment. As soon as an egg begins to be incubated, influences surround it which are very different from within and we wonder at the power of these life influences enclosed within a minute cell. Other influences, however, act upon the embryo from the outside. Temperature, moisture, air all effect the growth of the embryo chick in the incubating egg. After hatching, these surrounding influences increase and become more potent in the life of the chick. Shelter, food and all that is signified by the domestication and care of the fowls have much to no with their welfare and future usefulness as breeding stock. Summed up, these surrounding influences should result in continual comfort for the fowls.

Conditions of environment, causing discomfort, are sure to check the development and growth and result in impaired breeding quality. Unhealthy surrounding conditions may induce disease and destroy breeding power.

Much, therefore, depends upon the selection and maintenance of right conditions of environment for poultry. Here is ample opportunity for the poultry breeder, to exert his power, for most of the surrounding conditions are under his control. Suppose, for example, that he has fifty little chicks, which he is rearing in a brooder. If he selects and maintains for them a continuous comfortable temperature, other conditions being also favorable, the chicks grow thriftily and bring both pleasure and profit to their owner. If, however, the other conditions remaining favorable, he, by carelessness or accident, permits the chicks to get chilled, this one item of the environment being wrong, trouble begins, digestive disorder very likely follows, growth is checked or halted, many of the chicks die and those remaining alive do not prosper.

The food might not, at first thought, seem to be one of the conditions of environment. It does not surround the fowl, rather the fowl surrounds it. Consider, however, that the digestive tract is really a long tube, extending through the bird's body. It has a lining or skin on the inside. The organs and parts of the bird really lie between this inner skin and the outer skin of the body. Even the food in the digestive canal may be considered as outside of the vital parts of the animal, i. e., separated from them by the lining of the canal. Certainly nothing should be allowed to come in contact with the outside or inside lining of the bird which would inflict iujury.

One of the most important items of environment is the food, which should be wholesome, healthful, nourishing and supplied in properly balanced rations. Domestic fowls are almost entirely dependent upon the poultryman for their food supply in respect to both quality and quantity and this is one of his most important means of influence in the management of his breedig stock.

(Continued next issue.)

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The Warm Mash.

To feed or not to feed a warm mash in the morning, or any time during the day, is a mooted question among poultrymen. Considerations pro and con resolve themselves into one chief argument on each side. Those who favor it say that hens need the mash on winter mornings especially to warm them up and get them into egg-laying condition. While those who oppose it say that the hens quickly gorge themselves on the warm dough and then sit stupidly around too inactive to lay.

We have a theory of our own about the mash that is satisfactory to us. As we have many chores we cannot prepare a mash for the hens and feed them before nine or ten o'clock. But we think that a few handfuls of grain, preferably wheat, scattered in the litter, early, for the first feed gets the hens to exercising and warms them up. If the hen house is secure from rats and mice —and rats and mice are a nuisance in hen houses—the grain can be scattered in the litter the night before and the hens will begin to work as soon as they come from the roost. The poultry keeper can thus enjoy a morning nap so far as responsibility for the hens is concerned.

In the middle of the forenoon we make a warm crumbly mash of boiled vegetables, meal and bran, with egg-making ingredients such as beef scrap or animal meal, table scraps, and a little condition powder if desired, well mixed and seasoned. We then go through the pens, turn down the troughs, and feed the warm, savory mixture, stopping a little short of what the hens would like to eat of it. We wish to leave them with an appetite. We then remeve the boxes or troughs and again scatter a few handfuls of grain in the litter. The hens go merrily to work and the exercising helps to digest and make immediately available the egg-producing food of the mash. It seems to us that we get better results from the food in this wav than we could in any other way. A mash fed later in the day and not followed by the scratching exercise would not become so immediately available.

Next to this way of feeding a mash we consider plenty of fresh water, grit, oyster shell, a full crop of grain at night clean quarters, and plenty of fresh air indispensible in getting winter eggs.

Egg-Basket Robbers.

Here are some of the robbers of the egg basket. Watch to see that they do not keep your basket empty.

1. Poor ventilation of the poultry house. Foul air means stuffy houses and is about as dangerous as cold drafts of wintry winds.

2. Too much sloppy food and a lack of gravel and grain. Eggs cannot be manufactured without plenty of egg producing foods.

3. Parasites of different kind. These suck up the vitality of the hens. Whitewash, carbolic acid and kerosene emulsion mean death to lice.

4. A thin or broken roof. The hens generally roost near the roof, and if it is thin they will be uncomfortable in cold weather. If the roof leaks, on rainy days or nights the hens will be made to suffer from cold shower baths.

5. Damp or wet floors. Hens don't like slop and mud. They will not wade around in it unless compelled to do so. They are sure not to lay under such conditions, besides, disease of some kind is liable to break out among them,

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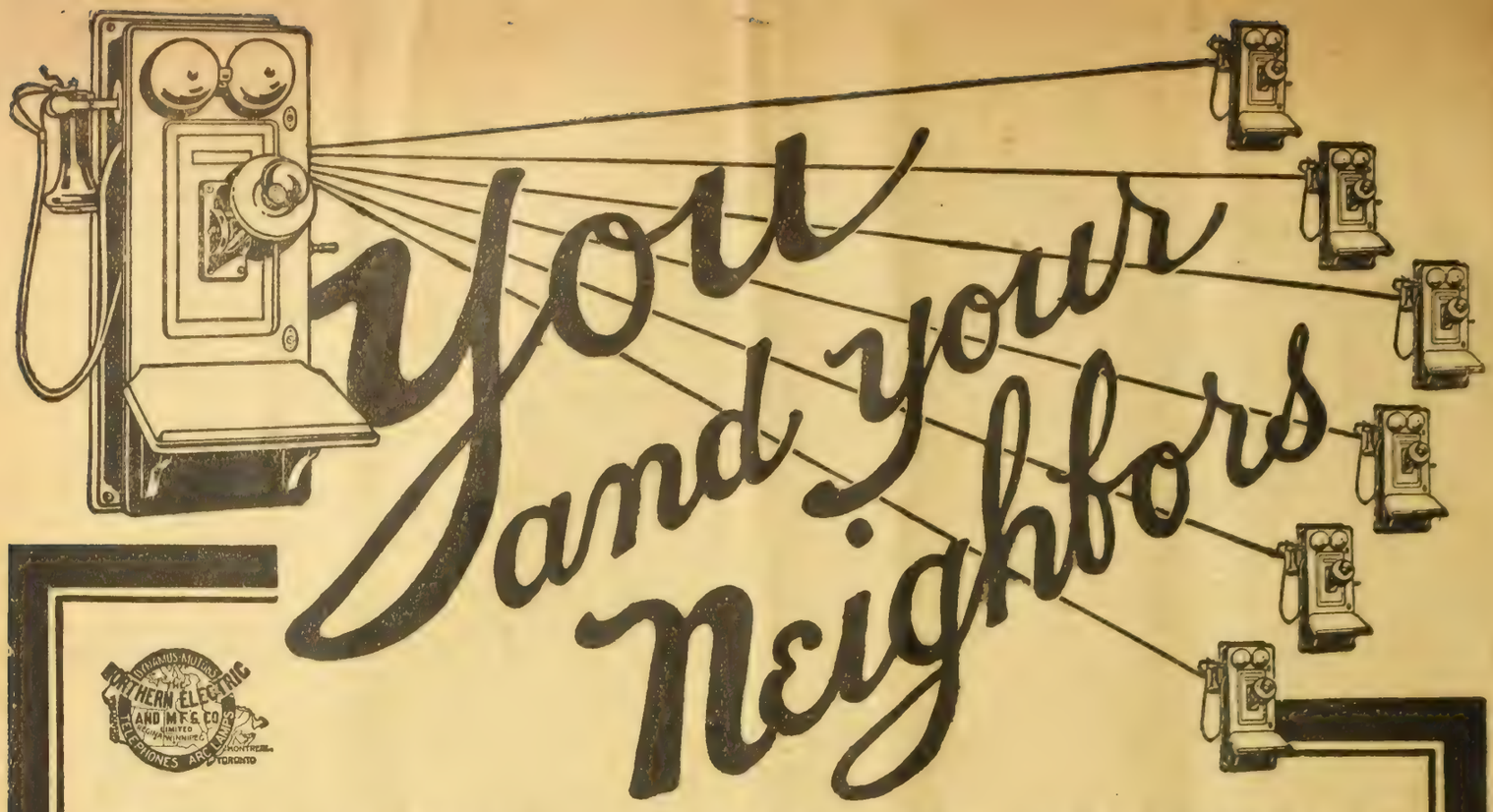

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WHILE "Northern Electric" telephones are as near perfection as brains backed by years of experience can make them, even yet are we trying to still further improve our instruments.

Our newly designed No. 1317 Telephone Set—absolutely the most modern farm 'phone in the whole telephone world—represents years of study, an expenditure of $10,000 in cash, and months of patient experiment and test before we have allowed it to go on the market.

We now pronounce it perfect—now, firmly convinced that it is all we have tried to make it, we offer it to you.

Examine it for yourself—or if you are not sufficiently well posted on such matters, get your own electrical expert to give our No. 1317 the severest tests of which he knows.

Take it up point by point. There is the transmitter, for instance, the same, standard long-distance type that is used on all standard long-distance 'phones. The general manager of the biggest telephone company in the world could have no better on the private 'phone he uses on his own desk. There is no better made. And not only is ours the best transmitter but it is also the cheapest in point of maintenance; it requires less battery current than any transmitter on the market—as little as 1-7 of some of the others.

Then the receiver on No. 1317 is worthy of attention. Here the magnets demand consideration; made from a special grade of steel, they are permanent—retain their full strength indefinitely. And the bell pieces are made of special annealed Norway iron. This receiver is so constructed that dust cannot accumulate on the back of the diaphragm nor can local noises disturb the listener and spoil transmission. Each part of the receiver on No. 1317 is the result of long and careful study—throughout, it is the best combination possible.

Or look at the switch-hook—note how compact and self-contained it is,—how all contact springs are vertically mounted as to afford no resting place for dust and other accumulations.

Our standard self-contained switch-hook is equipped with platinum points—you can understand the efficiency for which that makes.

And so it goes—through our No. 1317 every part is the best, and most perfect it is possible to devise. Never before has it been possible for any manufacturer—no, not even for us—to offer such an instrument to the Canadian farmer.

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THIS book, Bulletin No. 2816, we call it, (and that's what you ask for), not only tells you all about our instruments, but also tells you all you need to know—every detail—about the steps necessary to take in the organization of a rural telephone company. It describes the simple procedure—goes into it minutely—tells about the very small amount of capital necessary, explains how to interest your neighbors and informs you how your own community can have just as efficient a telephone service as the largest city on the continent. Write for it,—learn why a telephone on your farm will actually save instead of costing you money. Send today.

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Learn about the strongest most practical most durable and easiest-laid culvert ever made

PEDLAR PERFECT CORRUGATED GALVANIZED **CULVERT**

Frost-Proof, Rust-Proof and Wear-Proof

This triple-rib flange-lock principle, found only in Pedlar Culverts, not only adds greatly to the strength of the piping and makes a perfect joint—practically as good as if welded—but it also allows for expansion and contraction under cold or heat. Though a Pedlar Culvert, of any length, be frozen solid full of ice, it will not spring a leak. Send for sample and booklet and you will see why. State your probable needs and we will gladly quote prices.

Made of Special Billet Iron, Extra Heavy

In every size of Pedlar Culvert, which comes in all standard diameters from 8 inches to 6 feet, we use nothing but the best grade of Billet Iron, specially made for us, of extra-heavy gauge (14 to 20 gauge according to the diameter). This Billet Iron is curved into semi-cylinders—curved COLD, so there will never be any variation from exact dimensions; and it is then deeply and smoothly corrugated on a special press that puts a pressure of SIXTY TONS on every square inch of the metal. The corrugations, therefore, are uniform and very deep.

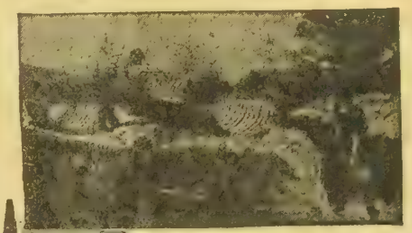
A few hours' work and a few dollars will put a modern and permanent culvert structure in place of a ramshackle bridge like this.

A structure like this, with Pedlar Culvert, won't wash out nor need repairs.

Galvanized AFTER Being Pressed Up

When the corrugating process is done, the sections are galvanized by our exclusive process that covers the entire surface with a thick coating of zinc spelter. Every edge, every crevice, is heavily coated with this rust-proof, corrosion-proof galvanizing; not a spot is left unprotected. This is the ONLY culvert galvanized AFTER being shaped. It is ABSOLUTELY RUST-PROOF.

Two men can ditch for, and lay more lineal feet of Pedlar Culvert in a day than four men can with any other culvert.



Can be readily laid by unskilled labor. Can't lay it wrong.

Will Stand Incredible Strains

The heavy-gauge Pedlar Billet Iron sections deeply corrugated and locked together **without bolts or rivets** by our compression triple-rib (this rib is flat, not corrugated), make a culvert that will stand enormous crushing strains and neither give nor spring. A thin cushion of soil on top is all the protection such a culvert needs against traffic; and no special precautions need be observed in laying it,—it will stand what no other culvert can.

COMPACT—PORTABLE—ENDURING—ECONOMICAL

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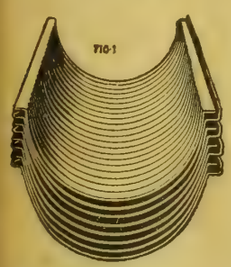
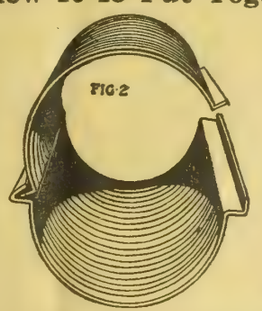
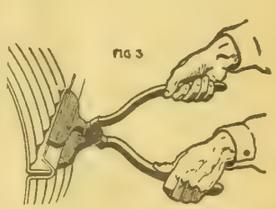


Pedlar Culverts are shipped in half-sections, nested—saving freight and making carriage easy in roughest country. Quickly and easily transported anywhere. Fig. 1 shows the half-sections or semi-cylinders, nested one within the other for shipment. One of the ribs is a radial flange, the other a re-curved flange. Sections are assembled as shown by Fig. 2. Note that the ribs are flat, and the curved part of the cylinder deeply corrugated. These ribs add vastly to the culverts' strength. Unskilled labor, with a simple



tool, quickly clamps the flanges together, making a triple-fold joint that is tighter and better than any riveted or bolted joint could possibly be. Fig. 3 illustrates the simplicity of the Pedlar Perfect Culvert flange-lock—no bolts, no rivets, no makeshifts. This is the only culvert that is laid with broken joints—the overlap between ends comes in the centre of each length. No chance of leakage.



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The Ordeal; or, the Spring and Mid-Summer of a Life.

(Continued from last issue.)

So it happened that she was quite alone, with the last footfall of the last scholar sounding under her window, before she opened the letter; and then she laid her head down upon her desk a moment, with an inward cry for strength, before she turned herself to read it.

There were two dates, the first several days old.

"Mother, I have a long story to tell you; I scarcely know where to commence. I have had a long talk with Mr. Bradstreet more than once; but at first I was at his house, at tea, and he sent for me to come into his library. I thought of a hundred things as I went along—that he was going to forbid me the house, and tell me that I must not think of Lucy. My mind was all in a whirl, for I had been thinking of her more than ever lately, thinking that she might be my wife some day—yes, mother, I did—and how you would love her, and she would love you, for she has no mother, you know and she likes nothing so well as to have me talk about you and my sisters; she never had a sister. Mr. Bradstreet sent for me into the library, but it was not for any unkind or harsh purpose. I have always told you that he was not proud or overbearing, and he proved it by making me an offer to take me into his counting-house. It seemed providential, mother."

"O Carrol!" And the dream of years seemed swept away, as Mrs. Austin turned the leaf. It is so hard to find that our best desires and purposes, seemingly in accordance to God's will, have been set aside by him for plans of his own ordering.

"It seemed Providential, mother." She glanced back at the words again. If it was His providence, though it broke her last "idol to her face," she would not reject it. "I thought perhaps the blessing upon the fatherless, that you have always said so much of to me, had moved Mr. Bradstreet's heart to place me in a way to help my brothers and sisters, and first of all to relieve you from your hard and busy life. And then Lucy! I have not told you all. He said he knew I loved Lucy and would give her to me, too. I don't know why, but that made me feel as if it was a temptation. It came into my mind like a flash, how Satan carried the Savior to a high mountain, and showed him 'all the kingdoms of the world and the glory of them,' and promised to give Him everything, if He would worship him. Everything seemed placed within my grasp. It was too much of a temptation; it betrayed itself; I could not fight away the feeling.

"I had been thinking all winter, ever since Christmas, that I ought to devote my life entirely to God's service. I was no sudden fancy. I have often thought of it before, even when I was no older than Ben; but this year, knowing that it was the last one here, the thought came back and back to me so often that I wonder I have not written to you about it before. The only thing was, I could not bring my mind to decide, and I did not want to trouble you with my doubts. I had almost made up my mind to write to you after my birthday, for I did vow in the stillness of my heart, that day if God would make me His servant, I would 'fight manfully under his banner,' but something held me back from sealing it, even by telling you; yet I know now that it was no less binding. Do you not see how the temptation put on the face of duty, as well as inclination? I thought of you first, of the toiling hands and the head that had never rested for my sake, for the home you were borne to and I could make for you again, of Ben's education, and all I could do for my sisters, and Lucy at last, when I had earned the right to make her happy. Oh, mother, you do not know, even you, with all your love for me, cannot tell what a struggle it was, knowing Lucy loved me, too; and, though she would not say a word, I knew what she hoped I would choose.

"I did not go near the house again. I have only seen her once since. I shut myself up in my room. I did as people used to do in old times, when they tried to discern God's will and empty themselves of selfish hinderances to it. I fasted, and prayed, and thought, and read my Bible, and, mother, I am not ashamed to tell you that I wept. Sometimes I walked the room pressing my hands against my head, for it seemed as though my brain would burst. The sacrifice seemed too great! I could not give up Lucy. Then your letter came. Oh what a comfort! 'At evening time, there was a light!' It came like a message of peace, like the leaves of healing to Christian after he fought with Apollyon, in the Valley of Humility! I cannot tell you what it was to me, or what it was not. It seemed easy then, not easy, but less impossible, to give up the thought of Lucy's love, and the worldly part of the temptation all vanished.

"I went to Mr. Bradstreet, and told him that I could not accept his kindness. I knew he would not understand it, and he did not. He felt hurt, more about Lucy than because I was ungrateful; he seemed to think I could not love her as much as I said I did, or I would not throw her away for a 'fanatical idea.' He was right about my not coming there any more, though it has been just like home this winter. He said and I know it is so, that, even if he should give his consent for Lucy to marry a poor minister, he could not afford to take enouge out of his business and settle on her to make her as comfortable as she ought to be, and I should be only selfish in asking her to wait. Bet he let me see her again, and that was a great comfort; for, though I told her I hoped she would be very happy and marry, and forget me, it will be something to think of as long as I live, that she did love me and understood why I gave her up and did not try to change me. Only once she laid her head on my shoulder and sobbed as if her heart was breaking, and said, 'Oh, Carrol, is death any harder than giving you up!' It did not seem to me that it could be harder for either of us than to say good-by for ever. But the struggle is all over now; and, in a little while I shall not be here to keep it in remembrance, and the pain will die away. I could do all the more good if I never marry, perhaps, and I can make you happy. My choice will make you happy, I know.

"I almost forgot to tell you that I have the Valedictory! Only think of it! When, six months ago, I should have telegraphed it to you, I believe. If you could only be here on Commencement Day. I cannot give it up, yet. It will be nothing to me; I have no one here to care—that I ought to feel would care, I mean.

Long, long after she had finished this letter, Mrs. Austin remembered the other which had come that morning. She had her wish but what an ordeal her child had passed to reach the goal she had pointed out to him! It passed through her mind again and again, all he had suffered and struggled against, and his noble self-conquest, before she came back to what he had said about Commencement Day. She had always secretly hoped to be there and share in his triumph. The wish had been the one darling self-indulgence of her life for the past two years; but she had failed to lay aside the means to accomplish it. Her habit of prudent foresight had, by God's blessing, helped her to meet every want for herself and her children. There was even a little sum accumulating in the hands of a kind friend against unforseen need, but she did not dare to draw upon it, anymore than if it had belonged to a stranger. Yet it seemed hard to give up the journey, especially hard when her boy seemed to need her comfort and sympathy. She said to herself, with an almost rebellious sigh, it was only one with her life, always to be chastened and restrained, even in what seemed most lawful.

But the other letter! Now that Carrol's was at last refolded, she touched it as she looked for the envelope. It was short, and the signature unknown to her. There was an enclosure which she did not unfold:—

"Dear Madam: The year before your husband's death, he lent me $20 to come to the place where I am now residing. He looked upon it as a gift, I know, for there was then little hope that I should ever repay it. I have always intended to, and do so now, inclosing you a check for twenty-five dollars, the original sum, with interest.

So it is in life, that our hopes are never so near fulfilment as when we think them quite lost.

CHAPTER V.

"I do hope we shall have good places. It's so nice having reserved seats; I don't believe I should have come at all to-day, if we had not had tickets for them." It was little Miss Perkins who had hurried along Benefit Sereet at a far more rapid pace than was usual with her. "Dear me, Lucy, how fast you do walk? Do you think there is any need for quite so much hurry?"

Women Who Suffer

from woman's ailments are invited to write to the names and addresses here given, for positive proof that Lydia E. Pinkham's Vegetable Compound does cure female ills.

Tumor Removed.
Chicago, Ill.—Mrs. Alvena Sperling, 11 Langdon Street.
Lindley, Ind.—Mrs. May Fry.
Kinsley, Kans.—Mrs. Stella Gifford Beaman.
Scott, N.Y.—Mrs. S. J. Barber.
Cornwallville, N.Y.—Mrs. Wm. Boughton.
Cincinnati, O.—Mrs. W. K. Housh, 7 Eastview Av
Milwaukee, Wis.—Mrs. Emma Imse, 883 1st St., *German.*

Change of Life.
South Bend, Ind.—Mrs. Fred Certia, 1014 S. Lafayette Street.
Noah, Kentucky.—Mrs. Lizzie Holland.
Brookfield, Mo.—Mrs. Sarah Lousignont, 207 S. Market St.
Paterson, N.J.—Mrs. Wm. Somerville, 195 Hamburgh Avenue.
Philadelphia, Pa.—Mrs. K. E. Garrett, 2407 North Garnet Street.
Kewaskum, Wis.—Mrs. Carl Dahlke.

Maternity Troubles.
Worcester, Mass.—Mrs. Dosylva Coté, 117 Southgate Street.
Indianapolis, Ind.—Mrs. A. P. Anderson, 1207 E. Pratt Street.
Big Run, Pa.—Mrs. W. E. Pooler.
Atwater Station, O.—Mrs. Anton Muelhaupt.
Cincinnati, Ohio.—Mrs. E. H. Maddocks, 2135 Gilbert Avenue.
Mogadore, Ohio.—Mrs. Lee Manges, Box 131.
Dewittville, N.Y.—Mrs. A. A. Giles.
Johnstown, N.Y.—Mrs. Homer N. Seaman, 108 E. Main Street.
Burtonview, Ill.—Mrs. Peter Langenbahn.

Avoid Operations.
Hampstead, Md.—Mrs. Jos. H. Dandy.
Adrian, Ga.—Lena V. Henry, Route No. 3.
Indianapolis, Ind.—Bessie V. Piper, 29 South Addison Street.
Louisville, Ky.—Mrs. Sam Lee, 3523 Fourth St.
South West Harbor, Maine.—Mrs. Lillian Robbins, Mt. Desert Light Station.
Detroit, Mich.—Mrs. Frieda Rosenau, 544 Meldrum Avenue, *German.*

Organic Displacements.
Mozier, Ills.—Mrs. Mary Ball.
Ligonier, Ind.—Mrs. Eliza Wood, R.F.D. No. 4.
Melbourne, Iowa.—Mrs. Clara Watermann, R. F. D. No. 1.
Bardstown, Ky.—Mrs. Joseph Hall.
Lewiston, Maine.—Mrs. Henry Cloutier, 56 Oxford Street.
Minneapolis, Minn.—Mrs. John G. Moldan, 2116 Second Street, N.
Shamrock, Mo.—Josie Ham, R. F. D. No. 1; Box 22.
Marlton, N.J.—Mrs. Geo. Jordy, Route No. 3, Box 40.
Chester, Ark.—Mrs. Ella Wood.
Ocilla, Ga.—Mrs. T. A. Cribb.
Pendleton, Ind.—Mrs. May Marshall, R.R. 44.
Cambridge, Neb.—Mrs. Nellie Moslander.

Painful Periods.
Goshen, Ala.—Mrs. W. T. Dalton, Route No. 3.
Chicago, Ill.—Mrs. Wm. Tully, 465 Ogden Av.
Paw Paw, Mich.—Mrs. Emma Draper.
Flushing, Mich.—Mrs. Burt Loyd, R. F. D. No. 3; care of D. A. Sanborn.
Coffeeville, Miss.—Mrs. S. J. Jones.
Cincinnati, Ohio.—Mrs. Flora Ahr, 1362 Ernst Street.
Cleveland, Ohio—Miss Lizzie Steiger, 5519 Fleet Avenue, S.E.
Wesleyville, Pa.—Mrs. Maggie Ester, R.F.D. 1.
Dyersburg, Tenn.—Mrs. Lue Hilliard, R.R. 1.
Hayfield, Va.—Mrs. Mayme Windle.

Irregularity.
Herrin, Ill.—Mrs. Chas. Folkel.
Winchester, Ind.—Mrs. May Deal.
Dyer, Ind.—Mrs. Wm. Oberloh, R. F. D. No. 1.
Baltimore, Md.—Mrs. W. S. Ford, 1938 Lansdowne Street.
Roxbury, Mass.—Mrs. Francis Merkle, 13 Field Street.
Clarksdale, Mo.—Miss Anna Wallace.
Guysville, Ohio.—Mrs. Ella Michael, R.F.D.3.
Dayton, Ohio.—Mrs. Ida Hale, Box 25, National Military Home.
Lebanon, Pa.—Mrs. Harry L. Rittle, 233 Lehman Street.
Sykes, Tenn.—Minnie Hall.
Detroit, Mich.—Mrs. Louise Jung, 332 Chestnut St.

Ovarian Trouble.
Vincennes, Ind.—Mrs. Syl. B. Jerauld, 508 N. Tenth Street.
Gardiner, Maine.—Mrs. S. A. Williams, R. F. D. No. 14; Box 39.
Philadelphia, Pa.—Mrs. Chas. Boell, 2407 N. Garnet Street.
Plattsburg, Miss.—Miss Verna Wilkes, R.F.D.1.

Female Weakness.
Willimantic, Conn.—Mrs. Etta Donovan, Box 299.
Woodside, Idaho.—Mrs. Rachel Johnson.
Rockland, Maine.—Mrs. Will Young, 6 Columbia Avenue.
Scottville, Mich.—Mrs. J. G. Johnson, R.F.D.3.
Dayton, Ohio.—Mrs. F. R. Smith, 431 Elm St.
Erie, Pa.—Mrs. J. P. Endlich, R. F. D. No. 7.
Beaver Falls, Pa.—Mrs. W. P. Boyd, 2109 Seventh Avenue.
Fairchance, Pa.—Mrs. I. A. Dunham, Box 153.
Fort Hunter, Pa.—Mrs. Mary Jane Shetto.
East Earl, Pa.—Mrs. Augustus Lyon, R.F.D. 3.
Vienna, W. Va.—Mrs. Emma Wheaton.

Nervous Prostration.
Oronogo, Mo.—Mrs. Mae McKnight.
Camden, N.J.—Mrs. Tillie Waters, 451 Liberty Street.
Joseph, Oregon.—Mrs. Alice Huffman.
Philadelphia, Pa.—Mrs. John Johnston, 218 Siegel Street.
Christiana, Tenn.—Mrs. Mary Wood, R. F. D. No. 3.
Pecos, Texas.—Mrs. Ada Young Eggleston.
Graniteville, Vt.—Mrs. Chas. Barclay, R.F.D.

These women are only a few of thousands of living witnesses of the power of Lydia E. Pinkham's Vegetable Compound to cure female diseases. Not one of these women ever received compensation in any form for the use of their names in this advertisement—but are willing that we should refer to them because of the good they may do other suffering women to prove that Lydia E. Pinkham's Vegetable Compound is a reliable and honest medicine, and that the statements made in our advertisements regarding its merit are the truth and nothing but the truth.

"You know how early people go, just as well as I do, Jane; and Henry charged me not to get crowded by the door of a pew, or I should not be able to see at all. Just look at all these ladies! We are not the only ones that have reserved seats." And so they hurried on until they came to the old church which had been the scene of Commencement Day triumphs from time immoral.

Already, a rainbow-hued crowd fluttered up the isles and stretched aroud the front seats of the broad galleries, like a row of tulips bordering a grass-plot, heralds of the mass of humanity, masculine, feminine, and juvenile, that would pack the whole house to suffocation two hours later. The young girls paused in the broad isle, and nodded to Ella Beckford, stationed in the choir, close to the grand organ that had pealed out Old Hundred at midnight at the close of the Commencement sermon. Miss Perkins, quick to discern acquaintances, for all the eyeglass that proclaimed near-sightedness, waved her fan here and there, and shook her parasol in recognition, while Lucy Bradstreet, her companion, satisfied the guardian of reserved seats that they had claims to be admitted to them. Already nearly every pew in the inclosed space had one or two occupants, and it was some little time before the fastidious Miss Perkins could decide where to bestow herself in her flounces. To be seen was quite as much her object as to see, even though the front pews were sure to be filled with grave old doctors of divinity and unattractive trustees. There were distinguished strangers always scattered here and there among them, and that delightful George Cushing, who wrote those clever stories for Harper, was expected, and the poet of yesterday was young and handsome. Besides, the isles were always filled, and there was an opportunity for some of the gentlemen to slip along and chat while the band was playing. So in spite of Henry Bradstreet's admonition, Jane Perkins was determined to sit as far forward as possible, and next to the door of the pew. The one in which she finally consented to settle her redundant array, after trying several that proved unsatisfactory, had a single occupant. "Quite as good as nobody," remarked Miss Perkins, in a tone that was far from being a whisper. Miss Perkins had reference to an oversight that might be exercised upon her little schemes for the enjoyment of passing flirtations. The lady did not look like a person who would interfere with or remark upon her young neighbors. She had a calm, grave face, so familiar that Lucy bowed as she came into the pew, and then checked herself in the fear that she had made a mistake. Bu it drew her to look at her neighbor again, and again. The thin, oval outline, the firm lips, the pale brown hair parted away under the plain bonnet-cap, were strangely familiar. She was evidently a lady, though her dress—all of stone-color and black, though it was not mourning—was not in the prevailing style, and her bonnet was unfashionably large. She looked at the long, slender hands quietly crossed, noted the absence of all ornament, and then turned away, lest her stealthy glances should be noticed and counted rudeness.

Faster and faster came the throng; fans fluttered in the galleries—a tulip-bed now—and the space around them grew less and less. Jane Perkins stood sentry for their pew, politely unconscious of the faint efforts of several individuals to occupy the two seats remaining, and the warning injuctions of the ushers, "Five ladies in each pew, if you please." Airy French bonnets and Chintilly scarfs marked the fashionable city ladies who had come to witness the debate of some son or broteer; and toilets quite as elegant, though not so novel, and a certain broad, slightly blouse look, those residents of the elegant mansions near the College who had seen the rush and parade of many Commencements, and wished the programme well over. There were the College people, the wives of the professors and trustees, who were personally interested in many of the actors in the brief drama about to be performed, and chance pleasure-seekers, who had no feeling save in the amusement of the passing hour.

Lucy Bradstreet looked around upon them, and remembered how often and how eagerly she had anticipated this day; and, now it had come, was there a heavier heart than her own in all that great multitude! Her brother had done well, much better than they had hoped—thanks to the generous emulation with which his friend had inspired him and his friend had won the valedictory; but it was indeed a valedictory—parting words to her, as well as to his classmates. She knew he would leave next day, and that their lives were henceforth apart; it was an ever present thought.

"How tiresome!" Miss Perkins had been a faithful sentry, but even her calm obliviousness of the numerous attempts to pass her could not prevail against the sister and cousin of young Martin, one of the graduates, who considered their right to the pew quite as good as Jane Perkin's who had not a relative in College, as they knew perfectly well; and their parasols were quite as pointed as the one that kept guard at the desired threshold. They did not mind the cool stare of amazement at their temerity one iota. Miss Martin's father was a member of Congress, even though Miss Perkins did not choose her acquaintance, and two winters at Washington had not increased her maiden bashfulness; she was much the taller and more sweeping of the two, so Miss Perkins had rather the worst of the encounter as Bell Martin and her cousin pushed past, regardless of fringe and lace, and nearly twitched the sentry's mantle from her shoulders. Nor did the look of ineffable scorn and writhing contempt darted after them ruffle Miss Bell's serenity in the least. She had reserved tickets; she had fought for a good place, and won it; she was very much obliged to Miss Perkins for keeping it; and she made herself very comfortable.

Very different was the movement at the opposite end of the pew, where the lady made room for Lucy Bradstreet, and the young girl quietly and pleasantly acknowledged it. The stranger thought she had not seen so homelike a smile among all the unknown sea of faces that oppressed her, and made her realize her isolation. She had a quick eye for elegance and taste, for all the plainness of her own attire; and the snowy chip hat, with its blue crape and white moss roses, made its wearer like a lilley of the valley—to pursue the flowers—in the neighborhood of the full-blown Miss Martin, and even Jane Perkin's overloaded dress bonnet.

"They are coming!" telegraphed the quicksighted little lady, drawing herself as far as possible from her unfashionable neighbors, while she availed herself of the elevation of a footstool to see the procession pass in. The tall, gentlemanly usher, with his blue-ribboned baton of office; the dignified and undignified dignitaries that followed; the short men and the spare men; the shining red faces bathed in perspiration, and the pale countenance indicative of much sermon writing and dyspepsia; the young men who had suddenly found themselves made doctors of law and divinity, to their own astonishment and the disgust of their rivals, and the old men who had worked fifty years for the Church and the world, with no public recognition of their merits, not so much as the moderationship of an association; smiling well-to-do busieessmen arm and arm with the minister of a country church, who had sent three boys to College on five hundred a year; the nervous Senior whose heart beat fast as he recognized dear, familar faces, and resolved to "do or die," and the callow Freshman in his first tailor's suit, who imagines himself a conspicuous feature in the pageant; the noisy, brassy, unheeded band, who puffed away for the edification of small boys and young ladies from the country. Every member of the long, slow procession that made Commencement Day had filed in and bestowed themselves before Miss Perkins removed her eyeglasses and subsided into her seat.

(Continued next issue.)

Cowan's "Perfection" Cocoa

is made from the finest carefully selected cocoa beans, roasted by a special process to perfect the rich chocolate flavor. Cowan's is most delicious and most economical.

The Cowan Co. Limited, Toronto. 90

$5.00 PANAMA SKIRT $2.95

Send to-day for this Skirt. It is a $5 all wool Panama Skirt. It comes in all shades. Give waist and hip measure also length desired. Sayecol r preferred. Its the new style, side pleated and button trimmed. Beautifully tailored. Guaranteed to fit perfectly, and give satisfaction in every way. Same style may be had in all shades of all wool Venetian $3.25. Reduced from $6. Order one of these wonderful skirt bargains at once. Order skirt No. 66 Add 35c. and we will pay postage.

Standard Garment Co., London, Can.

"SILVER PLATE THAT WEARS"

The Only Safe Guide

When buying silverware, to make sure that you get both quality and style, ask for

"1847 ROGERS BROS."

goods. Spoons, Forks, Knives, etc., bearing this trade mark are the best that can be had.

In buying Tea Sets, Tureens, Butter Dishes, etc., ask for the goods of

MERIDEN BRITA CO.

Proving by Actual Experiment

This experiment will always interest the children, and will provoke a good deal of thinking. The explanation, of course, is, that the lighted piece of paper which is inserted into the inverted glass drives out most of the air, so that when the mouth of the glass is quickly put down into the water there is very little air, and, consequently, very little pressure above the water within the glass. Hence, the weight or pressure of the air on the water outside the glass drives the water up into the glass to occupy the space from whence the air was driven by the burning paper.

A practical demonstration of this kind is always more convincing than any mere statement. This is particularly true of medical remedies.

The effect of the anti-toxin treatment for diphtheria is noticeable within a few hours, so that everyone must believe in its virtue. In a similar way, the treatment known as ORANGE LILY gives a practical proof of the progress it is making in curing women's disorders, and that, too, within a few days after commencing its use.

All authorities agree that in every case of women's disorders there exists a congested condition of the womanly organs. The circulation in these parts is sluggish or stagnant, and the result is that the broken-down tissue or waste matter which should be carried off if the blood was circulating freely, remains in these parts, causing inflammation, irritation, oppression of the nerves, etc. ORANGE LILY is not taken internally, but is applied direct to the suffering organs. It is absorbed into the circulation, and its antiseptic properties at once act on the waste matter referred to above. The consequence is that this waste matter, which is causing the inflammation, ulcers, nervous troubles, etc., begins to be discharged, and it continues to be discharged until all the foreign matter is removed from the circulation. At the same time the blood vessels and nerves are toned and strengthened, the nervous trouble disappears, the circulation is restored and good health follows.

Toronto, Ont., June 2, 1909.

Dear Mrs. Currah,—I wish to tell you that Orange Lily is doing me a great deal of good. Those ulcers come away one or two every week, and I have less pain and fewer headaches. I feel sure I will be perfectly cured in a little longer time.

MRS. D. S. T.

The explanation of the wonderful cures performed by ORANGE LILY is very simple. It is a scientific remedy, based on the discoveries of Pasteur and Lister. The conditions existing in all female troubles are alike in character, differing in degree and development only, so that a positive remedy, as ORANGE LILY is, acts with all the certainty of a chemical experiment. In order to convince every suffering woman that ORANGE LILY will cure her. I make the following

Free Trial Offer

I will send to every reader of this notice who suffers in any way from any of the troubles peculiar to women, if she will send me her address, enough of the ORANGE LILY treatment to last her 10 days. In many cases this trial treatment is all that is necessary to effect a complete cure, and in every instance it will give very noticeable relief. If you are a sufferer you owe it to yourself, to your family and to your friends to take advantage of this offer, and get cured in the privacy of your home, without doctor's bills or expense of any kind.

Enclose 3 stamps, and address, MRS. FRANCES E. CURRAH, Windsor, Ont. 1

Consumption Book FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1475 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

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We're th largest Bagpipe dealers in North America.

Lawrie's famous make is the kind we sell.

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We're from the Old Country ourselves and know all about the Pipes. Chanters, Bags, Reeds, etc., in big stock. Repairs promptly done. Write for catalog to-day.

ORME,

Ottawa, Ontario

Quality Butter

If you have never used a "FAVORITE" CHURN, you can't imagine what a difference it will make in the quality of the butter.

The "FAVORITE" is known all over Canada as the Churn that brings the quality butter—and gets every drop of butter out of the cream. Hand lever and foot tread —8 sizes.

"Puritan" Washer is another old favorite. Washes a tubful of clothes in five minutes. If your dealer does not handle them, write us.

74

DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

The Call to the Field.

Back to the farm, where the brownstone mansion's rearing; back to the farm, where they still afford fresh eggs; back to the farm, where the rooster, chanticleering, knows well the wealth in his pair of yellow legs; back where the cow, in the distance, softly lowing, brings up fresh milk that is rising every day; back where the steak grows, that keeps on going, going higher and higher, and melts away our pay; back where the hens lay at sixty cents a dozen, charging for overtime and Sundays, when they do; back to the land of the dear old Country Cousin—now is the time that he has the edge on you.

Back to the farm, where the money's all congested; back where the pork grows at twenty cents a pound; back where the Nation's cash is all invested; back where a dollar goes but half way round; back where the joys are that poets cannot utter; back where the corn shucks fifty cents an ear; back where they charge you forty cents for butter; back where there's wealth at a hundred plunks a steer; back where the pies are of ripe and yellow pumpkin, retailing now at some fifty cents a wedge; back to the home of the dear old Country Bumpkin—I guess we know who's the fellow with the edge.

Back to the farm, where the turkeys strut and hobble, listed up strong at full thirty cents a pound; back where they weigh legs and charge you for the gobble; back where the bank bills litter up the ground; back where Hi Hayseed opens wide the throttle, puts on more steam and crowds you in the ditch; back where the cream grows at forty cents a bottle; back where the squabs hatch, but only for the rich; back where the ducks, in their arrogance, are quacking, knowing their price tags keep them safe from harm; back where the farmhands all are busy stacking bank checks and greenbacks—back to the farm!

Back to the farm, there is riches in the flour, wealth in the beef, and money in the whey; back where the mutton's rising every hour; back where they measure money up like hay; back where the bees get overtime for working; back where the sheep grow golden fleece for wool; back where the lard sells at seven plunks a firkin; back where the old sock's stuffed and running full; back where good fortune's never false nor fickle; back to the land of the strong highwayman's arm; back to the jam and the silver-plated pickle; back where our money goes—back to the farm!—J. W. FOLEY, in Saturday Evening Post.

A Plea for a Woman's Page.

EDITOR MARITIME FARMER :—

I am a farmer's wife. The MARITIME FARMER and its predecessor have been coming into our house for years. Often have I scanned its pages to see what there was of particular interest to me, and nearly as often have I laid it aside disappointed. It is purely literature for the master of the house, and its contents are certainly helpful and instructive.

But what I want to know is this—why can we not have one page devoted to the interest of women? There are hundreds of intelligent farmers' wives and daughters, who would be glad to contribute something for the benefit of their sex. Many, who could interest and instruct each other in the exchange of ideas and methods. For want of reading, I find that we are to narrow in our views, too limited in our ideas. As a general thing, very few magazines reach the farmer's library table. His reading matter consists chiefly of the daily paper, with perhaps an occasional treatise on the horse or cow thrown in. Many of us are compelled, either by domestic duties, or for want of means, to remain closely at home. I really know women who have not been out of their district for years. Now tell me, please, how we can, under such circumstances, be the intelligent, up-to-date

The Empire PROVES ITS CLAIMS

Claims are **words**—Proofs are **Facts.**

Mere claims have often sold goods. Proofs are a record of dollars made —You, or anyone else, don't want the Cream Separator that **Claims** the most—you want dollars from your handling of milk. Therefore, you want the **proved** separator—the dollar-making.

FRICTIONLESS

Empire CREAM SEPARATOR

Here are some facts that will interest you—The Empire turns the most easily—is practically frictionless —is most easily washed—a few simple parts without a cranny or crevice in them—gets all the cream, and the highest quality of cream at that—is durable—will not get out of order—will cost you practically nothing for repair. These facts spell dollars for you if you give them the opportunity.

Send for our new Catalogue—it costs you nothing, but will show you how you can make **dollars.**

EMPIRE CREAM SEPARTOR CO.,

Sussex, N. B. - - Box 31

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A Wise Man Grasps His Opportunities!

This is yours.

BE WISE !

Cut out this ad. and mail it to us for our

Special Advertising Offer.

One month only.

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Gas or Gasoline Engines

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Guaranteed Satisfaction

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PROPERTY FOR SALE.

Property of 60 acres, new modern house, good barn and poultry buildings, frontage of 1,700 ft. on Main street, and ¾ mile from centre of Town of Sussex. It is beautifully situated and a most desirable country place and suitable for general farming fruit and poultry raising, &c. Terms and further description on application.

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Lime Sulphur Solution

carries more active sulphur in solution than other brands, and is the most effective spring spray for San José Scale, Aphis, Bud Moth, Apple Scab, Leaf Spot, Pear Scab and similiar parasites and fungi.

VANCO is a clean, uniform solution, free from sediment. One barrel makes 12 for spring or 50 for summer spray.

$8.00 per bbl. f.o.b. Toronto.

VANCO
Lead Arsenate

is rapidly replacing Paris Green for Codling Moth, Potato Bugs and all leaf-eating insects. Easier to spray, stays on longer, and kills more.

VANCO Lead Arsenate contains 15% to 16% Arsenic Oxide and 40% moisture average.

10 to 13c. per lb., according to quantity. Write for our free Booklet on Spraying. 4

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A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address

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companions that our husbands and children demand?

Many of us have, by hard work and self sacrifice, sent our boys and girls to college, determined that they shall have a better chance in this world than we. But have you ever thought—you dear old sweet-faced mother—how we compare with the educated people they have been meeting? In the thunder and lightning, for bread and butter, and the other necessaries of life, have we not been neglecting ourselves, both in mind and body? James Russel Lowel says that "woman is the master piece of the Creator, the greatest work of His divine hand." Is it not then up to us to keep ourselves in condition to do our best—to seize every precious opportunity that comes our way? Let us consider it a sacred duty to keep ourselves up to the highest possible standard, physically and mentally, otherwise we shall not be fitted to fill the divine purpose for which we are created. And let me also, my sisters, impress you with the fact that too much energy is wasted in fretting, worrying fault-finding, grumbling—in the little frictions and annoyances that accomplish nothing. Just look back over yesterday and see where your energy went to—see how much leaked away in trifles. I often repeat to myself one of the beautiful prayers of Robert Louis Stevenson. I pinned the slip to the wall and committed it while washing dishes. It is so short and contains so many good things, I shall give it, hoping some one may be benefited from it, as I was: "The day returns and brings us the petty round of irritating concerns and duties. Help us to play the man. Help us to perform them with laughter and kindness; let cheerfulness abound with industry. Give us to go blightly on our business all this day; bring us to our resting beds, weary and content and undishonored, and grant us in the end the gift of sleep."

The door of another year has been opened to us by hands not our own, and we have been thrust on 1910 with many a misgiving as to what it may hold for for us, and while the year is still in its infancy, let us resolve to make the most of our opportunities; begin with a firm purpose to better our condition; make up our minds to find the starting point that leads to efficiency and knowledge. One writer has said that the education of a child should begin with its grandmother, and rightly, too, for brains are, to a great extent, transmitted. Then, for the sake of our progeny, let us be brainy, virtuous, whole souled women. — FARMER'S WIFE, Andover, N. B.

Imitation Broiling.

Some foods, which theoretically should be broiled, are, in practice, much better if cooked in a very hot oven or on a rack set over a pan. This is especially true if the facilities for broiling are not perfect. A chicken or slice of fish, for instance, can be nearly cooked in the oven, which should be hot enough to sear the outside quickly, then browned over the coals or gas flame, to give it the mark of the broiler Broiled ham or bacon is excellent to eat, but wastefully cooked; if the same meat is cooked in the oven, the fat will be saved and the cooking done evenly. A wire toaster, laid over a tin pan, makes a convenient broiler; the racks in the broiling ovens or gas stoves are of little use, they are so inconveniently made. The handle of the ordinary toaster or broiler is too long and must be shortened to allow the oven door to close. Occasionally a short handled broiler is found in the first part of broiling and then finish with wires close together are convenient for bacon and oysters.

Many cooks use the gas range oven for the first part of broiling and then finish under the flame; this way ensures greater perfection in cooking and saves some labor, for it is not an easy task to watch a broiler that is down in the under part of the range and near the floor. Lobsters are cooked with less

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Chamberlain's Stomach and Live Tablets invariably relief to women suffering from chronic constipation, headache, biliousness, dizziness, sallowness of the skin and dyspesia. Sold by all dealers.

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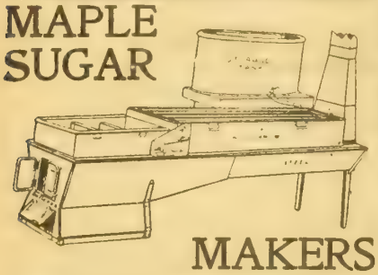

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

trouble in the oven than over the coal, for they splutter all over the top of the range; an epicure cannot tell where the cooking was done if he sees the marks of the hot wires, which can be added as a fancy touch.

The Canadian Forestry Convention.

Among those who have signified their intention of taking part in the Canadian Forestry Convention which will be held in Fredericton this week in addition to the President, are Mr. Thos. Southworth and the Vice-President, Hon. W. C. Edwards are:

Hon. Clifford Sifton, Chairman of the Commission of Conservation.

Hon. Jules Allard, Minister of Lands and Forests, Quebec.

Hon. Charles E Oak, Bangor, Maine, and Chatham, N. B.

Hon. J. P. Burchill, Nelson, N. B.

Dr. B. E. Fernow, Dean of the Faculty of Forestry, University of Toronto.

Dr. C. C. Jones, Chancillor of the University of New Brunswick.

Mr. W. B. Snowball, Chatham, N. B.

Mr. E. A. Sterling, Forester of the Pensylvania Railroad.

Mr. C. W. J. Hall, Supt, of the Bereau of Forestry, Quebec.

Mr. H. W. Woods, M. P. P., Welsford, N. B.

Prof. R. B. Miller, of the University of New Brunswick.

Mr. Ellwood Wilson, Grand Mere, Que.

Mr. F. C. Whitman, President Western Nova Scotia Lumbermen's Association.

Mr. G. Y. Chown, B. A., Registrar, Queen's University, Kingston.

Mr. W. R. Brown, Secretary Forestry Commission of New Hampshire.

Prof. E. J. Zavitz, Professor of Forestry, Ontario Agricultural College.

It is expected that the Forestry work of the Dominion and of the Provinces will be represented by others whose arrangements are not complete enough to permit of their names being announced.

RAILWAY ARRANGEMENTS.

The Railway Companies have kindly granted a single fare for this meeting. Delegates must purchase first-class full fare one-way tickets (the fare for which must not be less than fifty cents) to Fredericton. (or the nearest junction point if a through ticket cannot be obtained) and secure a certificate to that effect on the standard certificate form where the ticket is purchased. Railway ticket agents are supplied with standard certificates and are instructed to issue them on application. At the meeting, these certificates must be handed to the Secretary for signature by him and the special agent of the railway companies. At the time of validation, the special agent will collect from the holder of each certificate a fee of twenty-five cents.

RAILWAY CERTIFICATES WILL NOT BE HONORED.

(a) If a ticket for going trip is purchased more than three days (Sunday not to be counted a day) before the opening of the meeting.

(b) Unless ticket for going trip is purchased within three days prior to meeting (Sunday not to be counted a day) or during the continuance of the meeting.

(c) If not signed at the end of the meeting by the Secretary and vised by a validation paster affixed by the Association's special agent.

(d) Unless surrendered to railway ticket agents at Fredericton and ticket for return trip purchased within three days (Sunday not to be counted a day) after adjournment of the meeting.

(e) Unless presented to the ticket agent not less than thirty minutes before the train is due to leave.

(f) No certificates except the Standard form (procured from the ticket agent when procuring ticket will be honored for return passage.

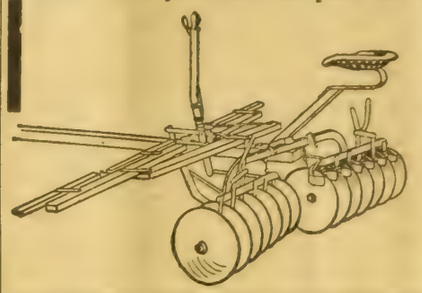
OBJECTS OF THE ASSOCIATION.

The Canadian Forestry Association was founded in 1900 and is the organization in Canada for promoting by agitation and education in the prevention and

Hard Land Won't Stick

The "Bissell."

Do the gangs on your harrow crowd together and rise out of the ground if it is hard? They don't do this on the "Bissell." The "Bissell" is so designed that the gangs cannot crowd or bump together, no matter how hard the ground may be. Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly. Wet, sticky soil doesn't clog it up either. The "Bissell" scrapers meet the plates "chisel fashion" and keep the cutting edges clean. Movable clod irons—an exclusive "Bissell" feature—keeps the space between the plates clear. We ask ask you to take the "Bissell" out into a field and test it beside other harrows. Then you'll have the proof that hard land won't stick it—that it pulverizes the best—that itis the lightest draft. Ask your local dealer to show you the "Bissell" or write to Dept. M. for catalog.



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Galvanized Rust-Proof—

But Won't Scale

Extreme weather changes in Canada is the reason why so much Wire Fence rusts about 12 or 15 years sooner than it should.

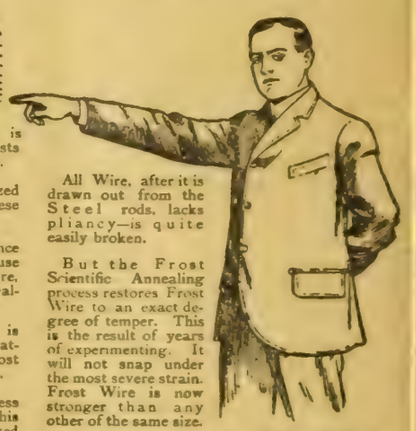
Nearly every Wire Fence is Galvanized too thinly to fight off the result of these weather extremities.

Two-thirds of the life of a Wire Fence depends upon its Galvanizing. Yet, because Zinc costs four times more than steel Wire, much Wire is wiped almost clean of its Galvanizing.

And, besides this, nearly all Wire is merely "coated" with Zinc. This "coating" will peel off years before the Frost Fence begins to even show signs of wear.

You see, all Wire, because of its process of manufacture, has a greasy surface. This dirt and scale must be thoroughly removed before Galvanizing will stick.

You can't expect Zinc to adhere permanently to greasy, scaly Wire, can you?



All Wire, after it is drawn out from the Steel rods, lacks pliancy—is quite easily broken.

But the Frost Scientific Annealing process restores Frost Wire to an exact degree of temper. This is the result of years of experimenting. It will not snap under the most severe strain. Frost Wire is now stronger than any other of the same size.

The man who makes this Frost Wire has been making some of the best in the States for 25 years. He ought to know how.

Cleaned Three Times

But Frost Wire goes through three Cleansing processes before it ever sees a Galvanizing Furnace.

This makes the surface as clean as a pin. It enables Frost Wire to be double-Galvanized, without fear of peeling off.

When Frost Wire goes through its double Galvanizing process, the Zinc not only spreads over the surface, but goes into the Wire, becoming a part of it.

The Frost Fence will now endure those awful weather variations from 10 to 15 years longer than any other Fence made.

Make Our Own Wire

We are the only exclusive Fence Company in Canada who Make and Galvanize Wire. The Wire formerly used for the Frost Fence was made under our own specifications. It was as near to what we wanted as we could buy.

But we knew that we could make better, so we built and equipped our own Mills. We are now making the best Wire ever used for a Fence in Canada.

Not Merely Excuses

Any Wire Fence without "coils" will snap when severely contracted. And it will sag, lose its shape when expanded.

But the Frost Fence has the essential coils. And they act exactly like a Spring. When contracted, these coils "give out" their surplus Wire, instead of snapping. And when expanded, this surplus returns to the Frost coils, instead of sagging.

The Frost Woven Fence is the only Machine-made Fence with necessary give-and-take features.

Lots of Fence has such things as Tensions, Curves, or Kinks. These excuses are so short that they'll snap with severe contraction. And they simply cannot "take in" when expanded.

Both the Frost Woven and the Frost Field-Erected Fence have the extra contraction and expansion provisions. These Frost Coils always act the same, regardless of number of times contracted or expanded.

Write for free booklet and samples.

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"Frost" Fence

extention of the forests of Canada and all the interests dependent upon them. It has now over two thousand members scattered from the Atlantic to the Pacific. It holds Conventions and meetings for the discussion of the forest problems in the different parts of Canada, publishes quarterly the Canadian Forestry Journal, an anuual report and other literature, and arranges for the delivery of illustrated lectures showing the state of our forests, and what should be done to prepetuate them.

The Association seeks as members all who spmpathasize with its objects and who believe that our natural resources should be conserved and rationally developed. The membership fee is one dollar per year which entitles the members to all the literature issued. If you are not already a member you are earnestly invited to join the Association by sending your name and address with the annual fee of one dollar to

NOTE.—This is the Annual Convention. The annual business meeting of the Association for the election of officers, etc., will be held at Ottawa, on March 10th. Notices will be sent to the members, who are also reminded that the membership fees for 1910 became due on January the first. These should be forwarded to the Secretary at the above address.

Value of Ancestors.

Breeders of pure-bred stock receive many letters in regard to the stock they have for sale. Every man who has been in the breeding business for any length of time can tell from the contents of a letter of enquiry whether the prospect of a sale is good or poor. Scores of letters are received from would-be purchasers whose only question is, "What is the price of your bull calves and yearlings?" Nothing is asked regarding individuality, nor concerning the dam, second dam, sire's dam, etc. Price is the only thing the writer wants to know about. Personally I have sold but one bull to an enquirer of this kind and after I described a few bulls to him he took the highest priced one of the lot, and I believe he bought the best bull for the money.

As well might a man go into a clothing store and ask the price of a suit of clothes. The clothing merchant can sell you a suit for $1 and from that price on up to $25 or $30. What determines the price on these different suits of clothes? Quality, style and finish. Now it is just the same in the pure-bred dairy stock business. Here price also depends upon quality, style and finish; in addition, a matter of as great importance as all combined is ancestry, especially in pure-bred dairy stock. A bull may be the perfection of form, the most stylish in appearance, and be finished in the most skillful manner, yet his ancestors may be inferior as milk producers Perfection of form and stylish appearance are much to be desired, and when combined with an ancestry of large producing capacity, an animal possessing them is usually worth all a breeder asks for it. Bulls from good ancestors, but not so full of quality or so stylish in appearance can be bought for less money and they will usually give fully as good satisfaction in a grade herd or on common cows, as the chief consideration in such herds is to produce cows that shall be profitable at the pail. These are the kind of bulls the dairyman should buy who has grades of the same breed or just common cows, Large production intensely bred in the bull's ancestors should be sought after in purchasing a bull for a grade herd or common cows.—T. J. Julian in Ottawa Valley Journal.

Fever Sores.

Fever sores and old chronic sores should not be healed entirely, but should be kept in healthy condition. This can be done by applying Chamberlain's Salve. This salve has no superior for this purpose. It is also most excellent for chapped hands, sore nipples, burns and diseases of the skin. For sale by all dealers.

Throw Away Your Drugs

Dr. McLaughlin's Electric Belt Will Make You Strong and Well

That's what a man does with his bottle of medicine as soon as he begins to feel the effects of my Belt—turn it down the sink spout.

If you want a stimulant, take whisky. If you want permanent health, strength and vigor, fill your nerves with electricity. Don't drug. Drugs are stimulants, narcotics, antidotes and poisons, and you know these things don't cure.

Take an inventory of yourself. Seek the truth. Don't further wreck your nervous system and befuddle your brain with DRUGS, stimulants, but use that great, wondrous power, Electricity, as I apply it with my Electric Belt. No sensible man now uses drugs to build up his strength or to cure his aches and pains. Drugs are unnatural, and what is unnatural must necessarily be harmful.

The most eminent physicians and scientists of the world now agree with me that electricity is the basis of human vitality, and that we cannot feel well and strong unless we have a normal supply of it in our bodies. Electricity is the life of the nerves and of the various organs, and there is no way in which it can be applied that is so convenient and effective as with my Belt. Applied while you sleep, it directs a soothing, invigorating current, a glowing warmth through all the organs of the body.

If You Have Rheumatism, Nervousness, Backsache, Kidney, Liver and Stomach Troubles, or if You Have a Pain or an Ache, Etc,

My Electric Belt Will Cure You

It has made thousands of ailing men and women strong and healthy. It will do the same for you.

Auld's Cove, N.S., October 1, '09.

Dear Sir:—

I have worn your Belt for three weeks, and write to let you know that I find it very good, indeed. It has helped my heart. I can sleep better, and the weak spells are becoming less frequent and less troublesome, and I hope soon to be able to report a complete cure.

Yours very truly,
JAMES W. BARRIE.

Sussex, N.B., December 7, 1909.

Dear Sir:—

I have used your Belt now for about four months off and on, and it has cured me of stomach trouble, which I had for years. The pain left after I had worn the Belt for one month, and I have not had any since. I can recommend your Belt to any one to be a good article.

Yours, truly,
J. D. WHALEN.

My Belt, with especial Electrical attachment, will restore your vigor. It will check all loss of vitality, and strengthen every organ of the body. It cures Nervous Debility, Varicocele, Rheumatism, Lame Back, Lumbago, Sciatica, any case of Kidney Disease that has not gone as far as Bright's Disease, Stomach Trouble, Constipation. If you haven't confidence in electricity, let me treat you at my risk. I will give you the Belt on trial, without one cent of risk to yourself. All I ask is that you give me security for the Belt while you wear it and you can

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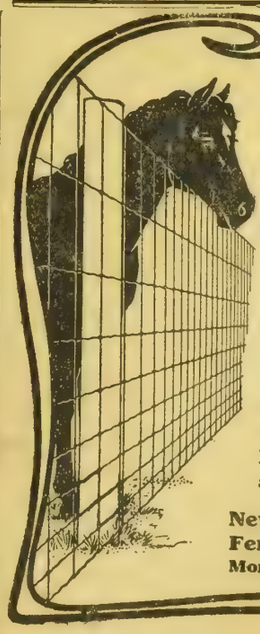

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Will you let us mail you our **free catalogue** which tells more about Maritime Fence and its absolutely secure lock?

New Brunswick Wire Fence Co., Limited. Moncton, New Brunswick

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OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Caustic Balsam

IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Poisons Interior Cancers, Boils Burns Coins and Bunions. CAUSTIC BALSAM has no equal as a Liniment

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for

Sore Throat
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REMOVES THE SORENESS--STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

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Seeds

$25

in cash prizes FOR 4 ONIONS of Cranston's Excelsior to be competed for at our store.

Catalogue of Garden Seeds, with particulars of prices. Free on request.

DUPUY & FERGUSON
Seedsmen
MONTREAL, QUE.

Leguminous Crops.

EDITOR THE MARITIME FARMER:—

Among the speakers of the fifth annual seed fair held at Berwick on January 19th, 1910 was Professor E. S. Archibald of Truro Agricultural College who addressed the audience on the subject of raising leguminous crops. He said that these crops consisted of beans, peas, tares, vetches clovers alfalfa and others akin to them.

There are many reasons why we should raise leguminous crops in preference to others. They make superior food for stock, as clover contains twice as much protein (a very essential element) as timothy hay. A second and more important reason is that legumes are not only nitrogen gatherers, but nitrogen consumers. Clover will take nitrogen from the soil and also has the faculty of gathering it from the air. Legumes, being deep rooted plants assist the air to permeate the soil thus making plant food available to a greater depth.

As cover crops, legumes are excellent, they save the nitrogen and return it to the soil when plowed under as humns. Orchards should not be left bare, otherwise the nitrates dissolve in the drainage, or are lost in the air as ammonia. Any class of cover crop will prevent the leaching of nitrogen and potash and aid in the retention of snow which is so benefical as a protection. Cover crops assist in ripening the wood of young trees in the fall by checking their growth. Although buckwheat is a good cover crop it is not so profitable as a leguminous one.

Some men allow the weeds to grow and say that if they plow them under, that they are as good as a cover crop. This bad method is not desirable. In the first place the weeds will not come up so evenly, or so thickly as a sowed crop, and this practice is conducive to the spreading of noxious weeds.

There are many failures in the raising of leguminous crops, one is owing to the lack of good seed which should be vigorous and bright as in any class of seed, samples containing noxious weeds should be discarded. To avoid bad seed, farmers should patronize the Canadian Seed Growers' Association, where they are certain to get pure bred seeds.

Lack of drainage is another reason why legumes fail to catch. It pays to underdrain sour wet land which by reason of its being water-logged cannot be worked as early as other soils. The result is that the crop is later in maturing and the yield will not be so great; no seed should ever be sown on wet ground, it is better to wait and let it dry out. Even sandy soil often has springy and wet spots.

A lack of good cultivation, and a deficiency of lime in the soil are two other reasons for unsuccessful legume culture. In districts where farmers are growing alfalfa for pasture, fifty per cent of them say that the soil needs lime. Where there are poor catches the grower should experiment on different sections of his fields with lime, nitro-cultures, or any of the manures. In peaty soils which are apt to be sour, lime sweetens and breaks down the tissue making good humus, it also frees the potash and makes it available. However it is not advisable to use lime until experiments have been made in small trial plots.

It pays to study the chemical constituents of crops and their requirements, and feed accordingly. For instance oats need, and have a difficulty in gathering nitrogen, while legumes find it hard to collect lime and potash which they need in large quantities.

In experiments at Truro, with fertilizers, muriate of potash alone gave practically no returns. It was concluded from these experiments that mixed fertilizers are the best, provided that the farmer mixes his own from high grade fertilizers. It is not profitable (for the farmer, with the agent is different) to buy mixed fertilizers as firms charge about four dollars per ton for mixing, which leaves room for fraud. The analysis on the bag is often mis-

USE I H C BINDER TWINE FOR SURE-STEADY-ECONOMICAL RESULTS

DON'T experiment with binder twine of low grade or unknown quality. Sisal or high-grade Manila, bearing the I H C trade-mark, should be your choice.

You can be sure that they will stand the necessary strain. They have the quality and quantity of fiber in them that insures strength to spare.

Even-spun, smooth-running, no knots, thereby avoiding tangles in the twine box and consequent waste. These qualities give even tension—which means perfect binding and perfect tying.

Inferior binder twine is dear at any price. It means not only waste of time and poor work, but a waste of the twine itself, possible loss of crop at harvest time; and it is not always full length to the pound. Every ball of I H C twine is

Guaranteed to be Full Length

And every ball runs smooth and steady so you can use all of it.

Remember, we sell grain binders. Naturally, therefore, we are more interested in the quality of twine you use than the twine manufacturer who does not sell binders.

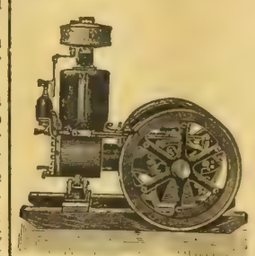
Stick to Sisal or Standard Sisal 500-ft. twine. If you prefer Manila, you will economize by getting high-grade Manila 600-ft. or Pure Manila 650-ft. Don't be fooled by a low price. Low-grade Manila costs as much as high-grade Sisal, but isn't worth as much. 85 to 90 per cent of the farmers know. 85 to 90 per cent use Sisal and Standard. In any case, look for the I H C trade-mark to be sure of quality. Choose from any of the following brands:

Deering McCormick International

Better let your local dealer know well ahead of time how much you will need. Meanwhile, if you want more interesting facts on binder twine, write the International Harvester Company of America at nearest branch house for particulars.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated)
Chicago U. S. A.



DO YOU WANT

The Simplest

Gasoline Engine?

Look at the cut

The '**Stickney**'

is known from the Atlantic to the Pacific because it is the farmers favorite. **So Simple.**

No Pipes and Separate Tank always in the way.

Strong and Heavy—Means hard work.

Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

WINDMILLS, GRINDERS, TANKS, PUMPS, Etc.

Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.

G. J. Barrett { Sales Agent } 32 Dock St. St. John, N. B. Branch at Fredericton, N. B

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, olind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Are you frequently hoarse? Do you have that annoying tickling in your throat? Does your cough annoy you at night, and do you raise mucus in the morning? Do you want relief? If so, take Chamberlain's Cough Remedy and you will be pleased. Sold by all dealers.

Medicines that aid nature are always most successful. Chamberlain's Cough Remedy acts on this plan. It loosens the cough, relieves the lungs, opens the secretions and aids nature in restoring the system to a healthy condition. Sold by all dealers.

Fruit Growers

DO you want other fruit growers to tell you how

NICO SOAP

AND

PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS., Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

DEPT. OF MILITIA AND DEFENCE, OTTAWA.

SEALED TENDERS (in duplicate) for the supply of Coal and Fuel Wood required to heat the Military Buildings at St. John, Fredericton, Woodstock and Sussex, N. B., for the year ending March 31st, 1911, will be received up to Monday March 7th next. Each tender is to be marked 'Tender for Fuel,' and addressed to the Secretary of the Militia Council, Ottawa.

Printed forms of tender containing full particulars may be obtained from the Secretary of the Militia Council, Ottawa, or at the office of the District Officer Commanding, St. John, who will furnish all information required.

Each tender must be accompanied by an accepted cheque, on a Canadian chartered Bank, payable to the order of the Honourable the Minister of Militia and Defence, for five per cent of the amount of the tender, which will be forfeited if the party making the tender decline to sign a contract when called upon to do so. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

EUGENE FISET, Colonel,
Deputy Minister of Militia and Defence.
Ottawa, February 4th, 1910.

(99—8—12)

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

leading. For instance it may be stated that there is so much available plant food, but the firm omits to say when those elements will be available. Ground leather meal may contain much nutriment, but it is not available for four years.

Nitro-cultures, if used to innoculate the seed, will also innoculate the soil. Each varietiety of legume has a different kind of organism living in nodules on its roots, which is able to gather nitrogen from the air; owing to this fact it does not follow that if one kind of legume will grow that another will be as successful on the same land. Legumes cannot be raised unless these organisms are available. The nitro-cultures which have been distubuted through the Annapolis Valley have not been as successful as they might have, had the season not been so dry.

After this address Professor Archibald answered many questions which were put to him. Among the things of interest Mr. L. D. Robinson asked for particulars regarding the scheme put on foot by the government to assist the farmers in understanding their land. In answer the professor said that it was proposed to let the farmers have a draining machine from the government if they paid for running expenses and a little more for wear and tear. Underdraining prevents winter killing and is the only salvation for heaving soil. The cost of this week is from twenty to sixty dollars per acre.

The writer remembers Professor Archibald's father once remarking in Professor Sears class that "trees would not flourish with wet feet." The son is eviently propagating his fathers theory. This was Professor Archibalds' first public appearance at Berwick, and his lecture was very favorably commented upon by those who heurd him.

EUNICE WATTS.
Kings Co., N. S.

EDITORS NOTE:—Owing to an oversight on the part of our printers only the latter part of the foregoing article was inserted in our last issue consequently the article is published in full in this issue.

Hot Beds and Cold Farmers.

(Continued from page 236.)

bed with good, rich, mellow soil arranged so that it can be easily covered with sash or cloth cover in cold or disagreeable weather.

It is advisable when tender plants, such as tomatoes, are forced, to start them in the hot bed, then transplant them into the cold frame. This hardens them and prepares them for the trying ordeal of transferring to the open ground where they are to stand By means of the hot bed and cold frame tomatoes may be safely transplanted when they are in bloom.

Lettuce may be grown during the winter in hot beds. It may be started in the hot bed and transplanted in the open ground if desired.

When a number of hot beds are needed, as for the mardet garden, care should be taken to have them arranged in rows, conveniently located with reference to barn and garden. It is also necessary to have a southern exposure so that there will be a large amount of sunlight for the young plants.

The Prince Edward Island Provincial Seed Fair.

The Prince Edward Island Provincial Seed Fair will be held this year in Thomas Anderson's show room, Summerside, on the 9th, 10th and 11th of March. "The best in Canada" is the motto of the Committee who have the oversight of the preliminaries that go to make the fair a success. All the first prize grain will be offered at auction sale on Friday, March 11th at 11 o'clock a. m. After the sale of the first prize grains all other exhibits will be offered for sale. The owner, however, has the privilege of bidding in his own exhibits if he so desires.

The seed shown must be a representative sample of a quality which each exhibitor must offer for sale. For instance an exhibitor of buckwheat must have at least 2 bushels for sale, an exhibitor of wheat must have 2 1-2 bushels for sale, an exhibitor of oats must have 5 bushels for sale, barley 5 bushels, late potatoes 5 bushels and early potatoes 2 bushels.

No premiums will be offered for seeds containing impurities of a noxious nature. Prozes ranging from $4.75 to 30 cents are offered.

The prizes are drawn out to ten places as the competition promises to be keen. Any person wishing to procure good seed grain would do well to visit Summerside on the Seed Fair dates.

An interesting exhibit of Household Science articles will also be held in McNeil's building on the same days on which the Seed Fair is held.

Interesting addresses will be held in Market Hall and on the whole an instructive, interesting time is expected.

EUREKA

SANITARY CHURN

There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass.

Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn.

Also made with Aluminum top.

The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remain upright.

If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue.

10 A

EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.

The **horse** does all the work, except holding the pole, with the **H. P. Spramotor.** It can be operated by either horse or hand. Has 8 nozzles at 175 lbs. pressure, which practically smoke the tree with spray. All automatic. The number of nozzles can be arranged to suit size of trees. The largest tree may be sprayed. Same price for 1 or 2 horses.

The **H. P. Spramotor** can be arranged for vineyards, row crops, strawberries or grain crops. The nozzles will not clog. **Agents wanted.**

Get our free Treatise on Crop Diseases.

W. C. HEARD,
1377 King St., - London, Ont.

The Connor Ball Bearing Washer

Will wash clothes cleaner and do it in actually less than half the time taken by the old way.

Who would ever think of trying to farm these days without the many implements which save so much time and make the Bountiful Harvest a possibility, and why drudge along with the old disheartening way when a Connor Ball Washer will take the load of Monday's Wash off your shoulders?

Our Booklet describes this Machinery in every detail. We will deliver freight prepaid to any address in Canada.

J. H. CONNOR & SON, Limited, OTTAWA, ONTARIO

WANT BIG CROPS FOR 1910?

Now is the time! Get ready for Harvest — Write at once for

McDONALD'S SEED CATALOGUE

(Mailed Free)

Contains valuable information for every Farmer and Market Gardener.

KENNETH McDONALD & SONS
Dept. D., OTTAWA-ONT.

Rennie's XXX

Grass and Clover Seeds

are best qualities obtainable, of tested germination and free from objectionable weed seeds.

Rennie's Seed Book for 1910

gives the fullest information about all **Farm** and **Garden Seeds,** especially about Grasses and Clovers, the kinds to sow and the best way to sow them for successful stands and crops.

RENNIE'S SEEDS have been sown for more than forty years, in ever increasing quantities, by the best and most successful farmers.

Rennie's Seed Book mailed free on request. Write for it.

WM. RENNIE CO., Limited,
TORONTO, MONTREAL,
WINNIPEG, VANCOUVER.

Write our nearest office.

SEVEN YEARS OF ECZMA.

Then After $500 had been Spent in Vain, Two Bottles of D.D.D. Cured.

Mrs. Horace Martin, of Sharbot Lake, Ont., writes:

"My husband had eczema for seven years. He spent hundreds of dollars but could not get cured. He was almost wild with the pain and itching.

I saw D. D. D. Prescription advertised in the paper. I sent and got a bottle and it gave my husband relief at once. He has used a second bottle and is entirely well.

The two bottles of D. D. D. which my husband used have done him more good than the $500 he spent before."

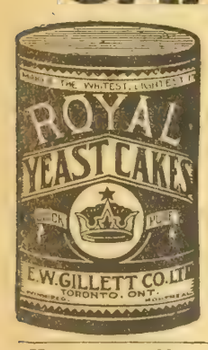
Do you suffer the torments of skin disease or do any of your family or friends? What's the use? D. D. D. Prescription will do for anyone what it did for Mr. Martin.

For free trial bottle of D. D. D. Prescription write to the D. D. D. Laboratories, Department F. M., 23 Jordan St., Toronto.

For sale by all druggists.

MADE IN CANADA

ROYAL YEAST CAKES



Best Yeast in the World

Sold and Used Everywhere

E. W. Gillett Co., Ltd.
Toronto, Ont.

Have you an idea to offer? Send it along and we will put it before the public. The seed you sow in this way may bear fruit that will help boost the agricultural interests of your province.

Farm Problems.

Haematuria.

SUBSCRIBER, writes: Can you tell me what to do for a mare that passes red or very dark urine? She is not in foal.

ANS.—The disease is known as haematuria and may be due to renal calculi, degeneration of the kidneys. Highly colored urine is also seen in cases of indigestion, induced by feeding innutritious food, such as large quantities of pea straw, especially if over ripe and musty. The condition is commoner in cattle than horses, and, in cattle, all authorities agree that the disease is caused by food containing an excess of water and diminished proportions of flesh and fat-forming matters. To cure the condition, prepare the animal by giving wheat bran mash and wateronly, for 12 hours, then give a physic of eight drams of Barbadoes aloes, two drams of ginger and glycerine sufficient to form a ball, then for 24 hours after give only bran mash at feeding time and small quantities of water. After that feed well cured hay, some bran and oats, three times a hay, with three or four hours between each meal, that the animal cannot get any food. Give salt frequently or place so that it can be had at will. After physicing ceases, give gentle exercise at least once a day, preferably twice, for two or three hours at a time, and take two ounces of sulphate of iron, two ounces of gentain and two ounces of nux nomica, mix well and divide into 16 parts and give one part, night and morning, in food. If the condition is due to indigestion, this will improve it. A dessert spoonful of salt petre in food, once a week, will be beneficial.—J. STANDISH, V. S.

Lactic Acid—Starter.

W. A. S., writes: Can you tell me where I can get pure lactic acid for use as a starter in sweet cream? Can you tell me the best way to prepare one's own starter from sour skim milk? As I churn so often that the cream does not have time to properly ripen, I would like to receive some information re the above questions.

ANS.—By sending twenty-five cents to Bacteriological Department, Ontario Agricultural College, Guelph, subscriber may secure a pure lactic culture. It is sent out in powdered media, with full instructions for propogating in milk, until suitable to add to the cream. A more expensive culture can be secured from the laboratories of Chris. Hawsen, Little Falls, N. Y.

A home made culture or starter may be obtained in the following manner: Clean and thoroughly scald half a dozen pint fruit jars. Fill these two-thirds full with milk or skim milk, from different sources getting, if possible, a couple from fresh cows, milked in a cleanly manner. Place these jars where they will be at a temperature of about 70°, until the milk thickens, Select those having a smooth, solid curd, free from gas holes, and having no whey on top. Skim off the top of the milk in the selected jars and again examine for the best flavored sample. Choose the one having the best regulation and cleanest lactic acid flavor. Use this for propogating a larger amount of milk to be added to the cream. If the larger amount of milk is heated to 180 degrees and cooled to 65 degrees, before adding the culture from the jar, a greater surety will be secured in the work.—C. W. DOUGALL.

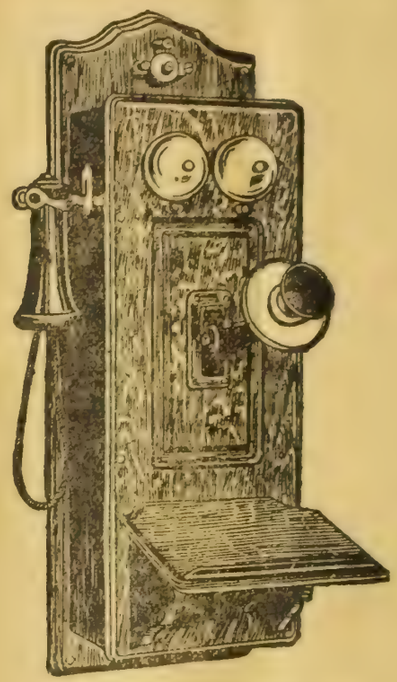
Home Made Cement Tile.

FARMER, PICTOU CO., N. S., QUES.—I realize the importance of drainage, but I find the price charged for small lots of tile is almost prohibitive for a farmer with small means, who does not wish to go in debt. Can a farmer make cement tile?

What is the cheapest method for performing the operation of manufacturing one's own tile?

TELEPHONES ON THE FARM.

The telephone is widely recognized to-day as a necessity on the farm Means of quick communication are as necessary to the farmer, both in his business and in his domestic life, as to the city man. Probably a telephone is a greater convenience and of more direct value to the farmer than to the man in the city.



WALL TELEPHONE, MAGNETO TYPE

Many Having Success.

Hundreds of local companies nave come into existance during the past three years, and are successfully supplying their immediate community with telephone service at reasonable rates.

Get the Information.

If you have not a local telephone service, write us and let us tell you what others have done. We shall be glad to furnish full information free of charge. Ask for our No. 2 Bulletin.

Independent Telephones.

We are a Canadian company manufacturing telephone equipment for the independent operators. We guarantee all our telephones for ten years. Our telephones are giving satisfaction to thousands of users throughout Canada. Let us quote you. It will pay.

Get Supply Prices.

We carry a lrrge stock of construction supplies constantly on hand, and make a specialty of prompt shipments. Get our prices.

Prompt Shipments and Guaranteed Satisfaction are Making Our Success.

CANADIAN INDEPENDENT TELEPHONE CO., LIMITED,
18-20 Duncan Street, Toronto, Ontario.

DIP YOUR SHEEP

Stockmen and farmers who use the Cooper Dips have healthier animals—get more wool and better prices. More than half the cloth and flannel of the world is made of Cooper dipped wool. Tanks supplied at cost to all users of the Cooper Dips.

COOPER'S POWDER DIP

The leading sheep dip for 65 years. Used on 250 million sheep every year. Kills ticks, lice, nits and eggs in one dipping. Does not stain the wool, but increases the yield and improves the quality.
Prices 25 gal. pkt. 50c., 100 gal. pkt. $2.00.

COOPER'S FLUID DIP

for all animals. A highly concentrated, non, poisonous fluid dip of marvellous strength. Mixes readily with cold water, whether hard, brackish, or salty. The only pure liquid dip—no sediment. Goes farther than Coal Tar dips and, therefore, cheaper. Positive remedy for scab, mange, ticks, lice, ringworm, eczema, sores, bites, stings, etc. One gallon makes 200 gallons for general dipping, or 300 gallons for disinfecting.
Price—Qt. can 75c. 1 gal. can $2.00, 5 gal. can $8.50.

COOPER'S WORM TABLETS

A sure remedy for intestinal worms in Horses, Sheep, Cattle and Hogs. These tablets offer the great advantage of correct doses and certain results. Dose—one tablet for lamb or shoat, two for sheep or hogs, three for horses and cattle.
Price—10 tablets 20c. postpaid, box of tablets, 200, $1.00, postpaid.

COOPER'S "LAVENE"

The most effective skin dressing for Horses, Cattle and Dogs. Cures worst cases of Mange and Ringworm at one dressing. Searches the skin and attacks the disease at its root. Improves the coat and renders hair soft and glossy. Is used by many of the best breeders in preparing animals for show.
Price Qt. can $1.00. Gal. can $3.00. CANADIAN DRUG CO., LTD., ST. JOHN N. B.

The following article on Home-Made Cement Tile appeared last year in the Canadian Horticulturist. It answers our correspondents enquiry very fully :

"Oftentimes, when fruit or vegetable soils need underdraining, the work is neglected on account of the cost of tile. Many undrained soils would be drained if tile could be made at home. Ordinary six-inch tile costs about $45 per 1,000, and even at that high price they can scarcely be had. Brickmakers say they are not convenient to make, as they take up too much space when drying.

"These tiles can be made at home at odd times in winter and spring. Such work is a good means of profitably employing labor in the slack season, and of retaining skilled help, that otherwise might be lost. Mr. C. E. Secord, of St. Catharines, makes his own tiles, and makes them of cement, at a low cost of $15 per 1,000. During a recent interview he showed the writer the apparatus, and explained how the work is done.

"The bottom of the apparatus is a 3-inch plank, about 12 inches wide, and any length desired, say 18 feet. A heavy plank is used so that there will be no 'spring' or 'give' when weighed with the tiles. On this plank is placed a number of circular pieces of sheet iron (the bottom of the moulds), 8 inches in diameter, with a small hole in the centre, sitting on a pin, or brad, driven into the plank, 12 inches apart, and protruding upwards about two inches. Around this sheet iron disc are a number of stout wire brads, driven into the plank to hold the mould in place.

"The mould consists of an outer 'shell,' made of two pieces of common sheet iron, 12 by 15 ins. each, and a central 'core' of solid wood, a cylinder 6 ins. in diameter and 15 ins. long. Such a mould will turn out a 6-inch tile with an outside diameter of 8 ins and 12 ins. in length. The outer 'shells' are bent in half circles, overlapping, and placed at the bottom, within the circle of brads on the plank. At the top they are held in place by an inch board with holes cut 8 ins. in diameter and properly spaced, that is, 12 ins. apart from centre to centre. The holes in this board fit over the upper ends of the 'shells.' Within each shell is placed a 'core,' the bottom end of which, being bored, sits over the central pin on the plank. The core protrudes 3 ins. above the mould for ease in handling, and so that it can be twisted occasionally to make the inside of the tile smooth.

"The mixture is made up of equal parts of fine sand and gravel, about the size of wheat kernels, and one-sixth Portland cement. This is mixed in the ordinary way, but not too wet. When the mixture is prepared, it is put in the moulds until they are about half full, then 'tamped' or pounded well. Then the remainder is added, 'tamped' again, and the top levelled off and smoothed. The moulds are allowed to 'set' for about 24 hours, after which they are removed, dried and stored until ready for use."

Seed Mixture for Permanent Pasture.

SUBSCRIBER, SALISBURY, N. B., QUES.—I am ploughing up some old sandy meadow and want to sow oats in the spring. The land has a good slope to the sea wall and looks as if it would be hard to grow any crop on it. I expect to fertilize it well with rockweed in the spring. What seed or mixture of grass seed would you advise me to sow for permanent meadow ?

ANS.—Would not advise your trying to seed down for permanent pasture on this land if at all possible to follow a rotation thereon. Results would be very much better than if sown to grass permanently. For rotation, the best mixture would be red clover, 10 pounds; timothy, 10 pounds per acre. If, however, you feel you must sow permanent pasture seed thereon, I would recommend Dutch clover, 2 pounds; timothy, 5 pounds; brome grass, 5 pounds; Western rye grass, 5 pounds; Kentucky blue grass, 5 pounds. This thoroughly mixed together and sown at the rate indicated per acre.

It will be absolutely necessary to give thorough preparation for seeding. The field should look as level and smooth as a perfect onion bed before attempting to sow any grass seed. The nurse crop, if any, should be sown rather thinly, say two-third of the usual seeding per acre. The grass should be divided into two equal parts, one-half sown lengthwise and the other half sown crosswise, then harrowed with a light harrow and rolled.—J. H. G.

The fence that's strong all through

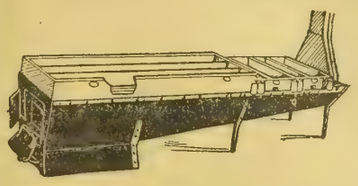
Every wire in our heavy farm fence is No. 9 hard steel, with uniform strength and lasting qualities in each strand. A fence with any small or soft wire in it is short lived. A chain is no stronger than the weakest link. Then PEERLESS Fence made from English wire is rust-proof—that withstands more than double the endurance of other makes.

Peerless the fence that saves expense

The PEERLESS does not cost anything to keep—there are no repair bills—it is not affected by changes of temperature. The horizontal wires being crimped makes ample provision for all contraction and expansion. PEERLESS Fence, once well stretched, is always tight—no shock affects it. We are manufacturers of high grade farm, poultry, ornamental fencing and gates. Write for Free Book, a sample of PEERLESS Fence and a simple method of testing any make of fence.

THE BANWELL HOXIE WIRE FENCE CO., LTD., DEPT. K, HAMILTON, ONT., WINNIPEG, MAN.

"Champion" Evaporators Makes Maple Earn More Money.



A LIGHT COLORED SYRUP. This is the kind that wins the blue ribbons at the big fairs, and brings high prices to the producer.

We will be glad to send you a catalog explaining WHY and HOW the Champion is in many ways the best for you.

The Champion Catalog is a book full of the most useful helps to make your sugar bush pay more.

Every improvement in Maple syrup making is fully explained. Send for a catalog to-day. Write now.

The Grimm Mfg. Co., 58 Wellington Street. MONTREAL.

"OLD TIME SONGS"

26 of the Melodies that Never Die

10c.

Songs we sang in childhood—that our fathers and mothers sang—that our children's children will sing. Songs sung the world over in every tongue.

Such favorites as Annie Laurie—Juanita—Home, Sweet Home—Lead, Kindly Light—Flow Gently, Sweet Afton—Swing Low, Sweet Chariot—My Old Kentucky Home—Blue Bells of Scotland—Old Oaken Bucket, etc. Words and music. printed on good paper, and bound in book form with illustrated cover. It's a book that deserves a place in every home where the purest and best in song and sentiment is appreciated. Sent on receipt of 10c.

CLARK BROS., Box 145 F **MONCTON, N.B.**

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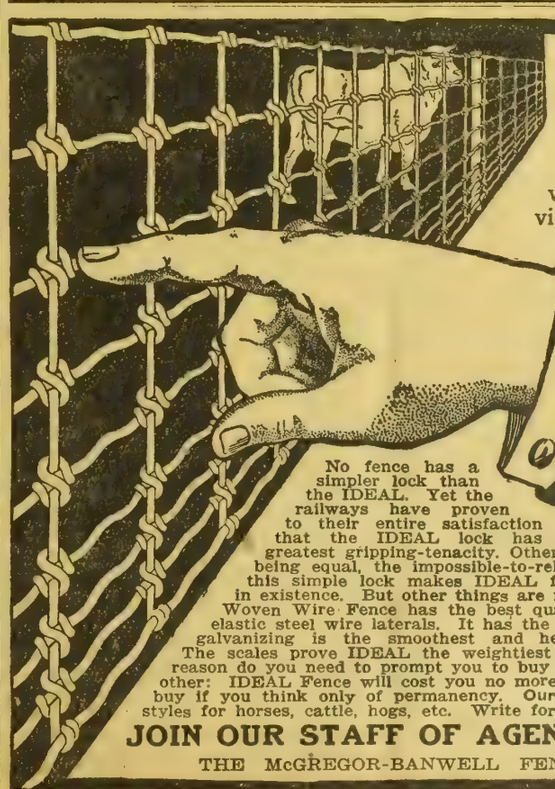


Think Only of Permanency

When buying fencing FORGET about the NOW cost. Do as the railways. Think only of PERMANENCY. Select the fence with the quality, weight, stiffness and strength to give longest service. And three or four years from now you will shake hands with yourself because you were shrewd enough to see eye to eye with the railways and buy IDEAL woven Wire Fence.

This Lock makes "IDEAL" FENCE Strongest in Existence

No fence has a simpler lock than the IDEAL. Yet the railways have proven to their entire satisfaction that the IDEAL lock has the greatest gripping-tenacity. Other things being equal, the impossible-to-release grip of this simple lock makes IDEAL fence strongest in existence. But other things are not equal. IDEAL Woven Wire Fence has the best quality of hard drawn elastic steel wire laterals. It has the stiffest uprights. The galvanizing is the smoothest and heaviest—most rust-proof. The scales prove IDEAL the weightiest woven fence. What further reason do you need to prompt you to buy IDEAL fence? Well, here is another: IDEAL Fence will cost you no more than other fences that you will not buy if you think only of permanency. Our fence and gate booklet shows different styles for horses, cattle, hogs, etc. Write for your copy.

JOIN OUR STAFF OF AGENTS and increase your income. The weight, quality and strength of IDEAL fence make it easiest to sell.

THE McGREGOR-BANWELL FENCE CO., LIMITED, WALKERVILLE, ONT.

Preparing Wool For Market.

Young Breeder, Antigonish Co., N. S. Qus.—What is the best way to prepare wool for market so that one may realize the best available price for it?

Ans.—The price of wool may be lowered or increased by the condition it is in when marketed. The condition of the wool at marketing time should be uniform throughout. If it is to be washed on the sheep's back see to it that the sheep are washed so that the wool will be clean, and do not let them run until the wool contains as much grease and dirt as it held before the sheep were washed. Tags should not be tied up in the inside of fleeces, but sold separately. If wool is to be shorn unwashed, the same care ought to be taken to keep the fleeces free from tage and use all diligence in keeping all foreign substances from the fleeces.

The question of tying the fleeces is also to be carefully considered. Use twine which will not damage the wool. Never use binder twine, as the fibres of sisal refuse to take color, and in sorting wool these sisal fibres cost the manufacturer much trouble and annoyance. Coarse, loose twine of any kind should not be used. Use a small linen or hemp twine, putting one string around each way of the bundle. In tying spread the fleece out on a clean floor with the outer ends of the wool up. Fold the skirts of the fleece in towards the centre only a trifle at each end, but considerable on the sides, so that the sides lap well, and roll the fleece from end to end making a short cylindical roll of wool. When rolled this way a small hemp or linen twine run around the roll a little distance from each end will do. Some fleeces are tied with a roll of wool, a plan that is not to be recommended as it does not leave the fleece in good condition and binds it too closely in some places; besides it leaves the fleece in the best possible condition to get torn. Keep out the tags, put all the wool and nothing else into the roll and tie up as described above, and you will get all for your wool which the market will allow.

MARKETS.

St. John Prices.

GRAIN.—Oats, 50 c to 55c.

DRESSED MEATS.—Beef (carcass), 5½c to 9c; beef (retail), 8c to 20 c; mutton, 5c to 8c; veal, 7c to 10c; lamb 7c to 10c; pork, 10½c to 11c.

DAIRY PRODUCTS.—Creamery butter, 25c to 28c; dairy butter, 20c to 24c.

POULTRY AND POULTRY PRODUCTS.—Eggs 25c to 27c: fowl, 70c to $1.50; chickens, 75c to $1 50; ducks, 90c to $1.40; turkeys, 23c to 25c.

FRUIT.—Apples, $2.00 to $4.50

VEGETABLES.—Carrots, $1.20 to $1 50; potatoes, $1.25 to $1.50; turnips, 65c to 80c; beets, $1.50.

Charlottetown Prices.

Apples per barrel, $1 75 ot $4.50, according to quality and variety. Quite a few Ben Davis are being packed by the Co-Operation Fruit Packers Association for the English market.

Mutton, if for supply, worth 7c to 8c per lb.

Pork, supply kesps up and receipts have been good. Prices are at top notch that has been reached so far as we can remember. Select hogs worth 10¼ worth ¼c extra if dressed for inspection with usual discounts for heavy fats.

Eggs, the mild winter has kept supplies coming forward and as shippers are not willing to take risks of delivery at destination the business is confined principally to the retail stores. They are paying about 25c per doz, but a slight increase in supplies would glut the market.

Butter, the market has been well supplied and lately the prices has been easier. Choice farmers separator butter selling to-day at 20c to 21c and ordinary dairy is hard to dispose of at 18c to 19c. Creamery solids have also been lower and we know of one lot of choice creamery tubs being sold at 23¾c although most factories are holding at 24c to 24½c.

Oats, the supply of oats in store is small and deliveries very light and prices are strong, white selling as high as 43c and black at 45c although one cent less is the general quotations.

Hay, pressed hay is in very limit supply on the market here although there is quite a lot in the country but the continued bad roads has prevented deliveries and as the prices has been advancing farmers are in no hurry to sell. We quote $10.50 to $11.50 for best quality although it might not be easy to dispose of a large quantity at the outside figure.

Poultry, fowls and cickens are about the only

ONLY ONE QUALITY THE VERY BEST

STEELE · BRIGGS SEEDS

TESTED FOR GERMINATION TESTED FOR PURITY

SOLD BY LEADING MERCHANTS EVERYWHERE.

FREE FREE

This elegant watch, ladies' or gents' size, stem wind and set, fancy engraved cases, **fully guaranteed**, will be sent to you **ABSOLUTELY FREE**, if you will sell only $3.00 worth of **Lovely Picture Post Cards**, 6 for 10c. These are the most artistic, beautifully colored and embossed cards issued this season. **Views, Mottoes, Floral, Holiday, &c.** These are the fastest sellers. Get the best. Write to-day and we will send you a package. Sell them and return the money and win this **Handsome Little Watch.** You can also win a lovely **Tea Set FREE** if you will help us to enlarge our business by getting only 6 other agents and without having to sell any more goods.

COBALT GOLD PEN CO., Card Dept. 70 Toronto, Ont

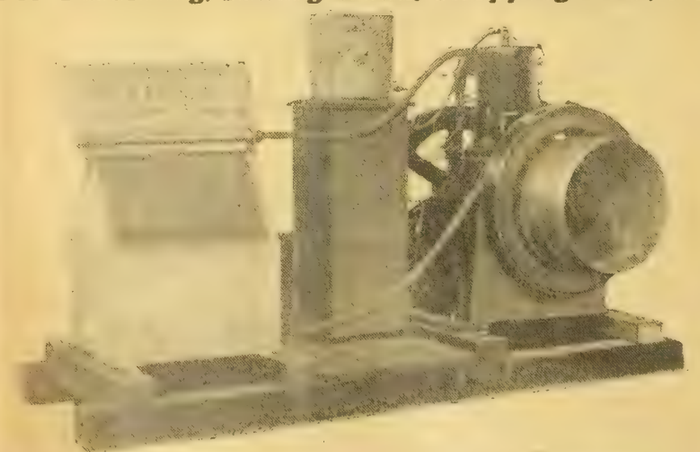
N. B. Potatoes

I grow and have for sale large quantities of Potatoes. Seed varieties a speciality.

Geo. A. Fawcett, Middle Sackville, N B.

"The FRASER STATIONARY" Gasoline Engine

For Threshing, Sawing Wood, Chopping Feed, etc.

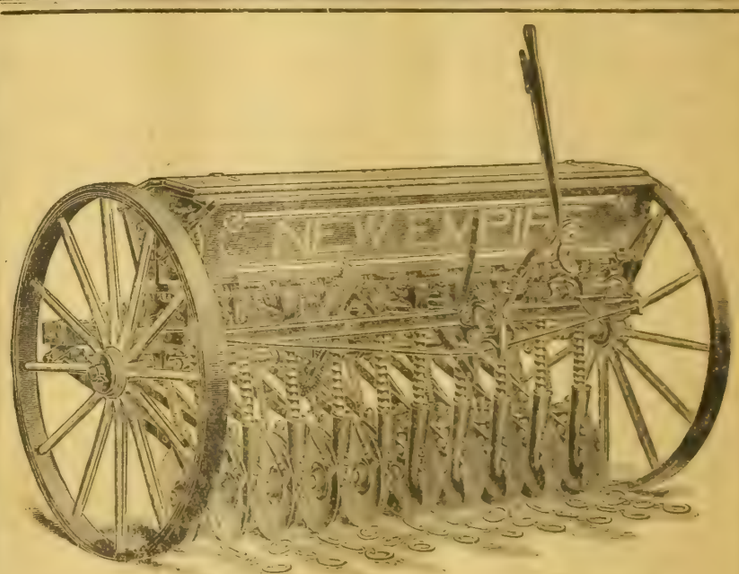


3 H. P. to 4 H. P. $140.00 5 H. P. to 7 H. P. $200.00

7 H. P. to 9 H. P. $250.00

Made in Canada by **Send for Descriptive Circular**

The Fraser Machine & Motor Co., Ltd., New Glatgow, N. S



Empire Fertilizer Drills.

When you buy a Grain Drill, do not purchase an experimental machine, that no one knows whether it will sow right. A Grain Drill should be able to sow all known grains and commercial fertilizers in any quantity desired and sow them right. There is no one tool on the farm that plays such an important part in the final results, the harvest—as does the Grain Drill. If the machine skips and bunches the seed and does not sow all the seed at an even depth in the soil, and an equal amount of seed in each furrow, how can the farmer expect to get a fruitful yield of high-grading grain

The Empire Drill has been on the market for more than half a century and it is used by the most progressive and successful farmers in all parts of the grain-growing world. This is ample evidence that the Empire is all right. Because, if the machine would not do the work as it should be done it would never have survived—it would not be manufactured to-day. Empire Drills will sow all brands of commercial fertilizers, no matter how obstinate, in wide range of quantities. Every grain feed sows exactly the same as its neighbor, plants the seed in properly prepared seed furrows at an even depth in the soil, an equal amount of seed in each trench without skipping or bunching Even sowing means even growing, even ripening, and a proper high grading crop. We want you to see the Empire Drill, See how well it is made, how easy to operate, how simple it is and what choice materials enter into its construction.

Bligh & Prince, **Agricultural Implements and Carriage Dealers,** Truro, N. S.

Exclusive Agents in Nova Scotia for Empire Grain and Fertilizer Drills.

kind offered and are worth 10c to 12c according to quality.

Potatoes are about the only kind of vegetables procurable at present except from the retailers at this season and as the quality was so bad last fall the dealers put in small stocks, consequently any that come out at present find ready sale at the retailers at good prices, 40c per bush being paid, but shippers will not touch them at any such prices.

Halifax Prices.

FEEDSTUFFS.—Bran, $24.00 to $25.00; shorts, $26.00 to $27 00; middlings, $27.00 to $28.00; corn meal, $1.70 to $1.75 per bag.

DRESSED MEATS.—Beef, (carcass) 8c to 9½c; beef, (retail) 12c to 20c; mutton, 6½c to 7c; veal, 6½c to 7c; pork, 10c to 10½c.

HORSES.—Drafters, $250.00; roadsters, $200.00; carriage, $150.00.

DAIRY PRODUCTS.—Creamery butter, prints, 28c to 29c; solids, 26c to 28c; dairy butter, prints, 24c to 25c; tubs, 22c to 23c; cheese, large, 13c to 13½c; twins, 13½c to 14c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 27c to 28c; fowl, 75c to $1 00 per pair; chickens, $1.00 to $1 25 per pair; ducks, 16c to 17c per pound; geese, 16c to 17c per pound; turkeys, 22c to 23c per pound.

FRUIT.—Apples, $1.50 to $3.00; cranberries, $7 00 to $8.00.

VEGETABLES.—Carrots, $1.25; potatoes, $1.50; turnips, 90c to $1.00 per bag; beets, $1.60 per bbl.

MISCELLANEOUS.—Hay, $12 50 to $14.50; straw, $9.00; wool, 21c; calf skins, 15c to 18c; sheep skins, 80c to $1.00; beef hides, 10c to 11c.

There is slightly a firmer feeling in the butter market owing to increased enquiries in Montreal for creamery solids for western shipments, local receipts of creamery are light and will not increase to any extent until middle of March. Dairy butter is still coming forward in large quantities and of only fair quality, receipts almost exceed demands.

Cheese, the market has advanced half cent per lb. and will in all probability go higher as Montreal reports continued export enquiries and stocks held here are light

Eggs, owing to the mild weather, receipts are increasing and on account of no interruption to navigation with P. E. I., the trade here have been able to bring forward fresh laid from P. E. I. each week thus keeping the market well supplied, in fact receipts during the past week were too heavy for local market and several shipments of considerable size were made to Quebec. Limed stock is exhausted and if continued cold weather should set in higher prices would be looked for.

Potatoes and other vegetabtes are very quiet. Collections are reported very poor for City but fairly good in country.

D. S. B. Exhibition Grants.

The Executive of the Shorthorn Breeder's Association which met recently in Toronto proposed that the following grants be made for exhibitons,

Ontario, at Toronto, $1,000.
Ontario at London, $250.
Ontario (Winter Frir), at Ottawa, $125.
Manitoba, Winnipeg, $300.
Manitoba, at Brandon, $300.
Alberta, at Calgary, $300
Saskatchewan, at Regina, $300.
British Columbia at Victoria, $50.
Quebec, at Sherbrook, $160.
Maritime Provinces, at Halifax, $50.

The grants are made subject to the condition that the executive shall be satisfied that the animals winning prizes are recorded in the Shorthorn herd book, that they are the property of the exhibitors at the time of the show, and that the Secretary receiving the grant shall contribute an equal amount toward Shorthorn prizes.

A PLEA FOR MARITIME PROVINCES.

F. L. Fuller, of Nova Scotia, desired to see the grant of the Maritime Provinces increased beyond the figure of $50 provided for in the report of the executive He said breeders in the Maritime Provinces had some years since given up their records and joined in the Dominion herd book It was hard to convince some of the people that this should be done, and he wished liberal treatment accorded to Maritime Provinces on that account.

Capt T. E. Robinson, who presided, pointed out that the total grants for all fairs were $3,000. If this sum were devided according to the paid-up membership in each Province, it should be appropriated as follows: Ontario, $2,038; Manitoba, $476; Alberta, $153; Saskatchewan, $164; Quebec, $86; British Columbia, $24; and the Maritime Provinces, $68.

It was further pointed out that the executive had proposed that a special grant be made to the Dominion Exhibition to be held at St. John, N. B., This year if deemed advisable.

The recommendation of the executive in this particular was approved and on that understanding the regular grants for fairs were allowed to stand as recommended by the executive.

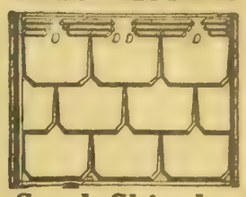
During the discussion there was a rather sharp passage between Robert Miller of Ontario and C. A Archibald of Nova Scotia.

Mr. Miller said in times past, when more liberal grants had been given the Maritime Provinces, complaint had been made there that professional show men went from one show to another and took in all the prizes.

"Who gets them here ?" asked Mr. Archibald "Professionals or amateurs ?"

"Many a dollar is lost by putting off until to-morrow. Send for catalogue to-day."
—*The Philosopher of Metal Town.*

EASTLAKE



Steel Shingles

No building material like this— "METALLIC"

is superior in every way. It is most economical—is easy and quick to lay or erect, saving expensive labor, and lasts a lifetime without continual repairs. Lightning, rain, wind or snow has no effect on "Metallic"—it is WEATHER, FIRE AND RUSTPROOF, the best material for all buildings.

Look over this list—all made from the finest quality sheet steel

"EASTLAKE" METALLIC SHINGLES. On buildings for 25 years, and still in perfect condition.

"METALLIC" CEILINGS AND WALLS. A handsome, sanitary decoration—lasts a lifetime.

"METALLIC" ROCK FACED SIDING. In brick or stone design for houses.

"MANITOBA" STEEL SIDING. The best for large buildings, elevators, mills, storehouses, etc.

CORRUGATED IRON—GALVANIZED OR PAINTED. For implement sheds or barns, fireproof and durable.

You should read our interesting booklet "EASTLAKE METALLIC SHINGLES" and our new Catalogue No. 70. A post card with your name and address will bring them to you at once.

MANUFACTURERS

Agents Wanted in some Sections.

Write for Particulars.

The Metallic Roofing Co Limited
TORONTO & WINNIPEG

2023

PURE BRED PIGS AND POULTRY

AND EGGS FROM PURE BRED POULTRY

Tamworths

Yorkshires

Berkshires

Chester Whites

Free to Our Readers

THE MARITIME FARMER will give a pure-bred Yorkshire, Berkshire, Chester White or Tamworth boar or sow pig of from 4 to 8 weeks old and with pedigree eligible for registration, to any reader who will send us only twelve one-year subscriptions, or 11 new subscriptions and your own renewal subscription. These pigs are the best procurable from Canada's leading Breeders.

Raise Pure-Bred Poultry and Sell Eggs Next Spring for $1.00 per doz. Instead of 15 Cents per doz.

For only three one-year subscriptions to THE MARITIME FARMER, we will send free a pure bred pullet or cockerel of any one of the following breeds: Barred Plymouth Rock, White Plymouth Rock, White Wyandotte, Buff and White Orpington, White Leghorn, Brown Leghorn, or R. I. Red, or, if you prefer, a setting of eggs from any one of the above mentioned breeds, will be sent on the same conditions. We will send a pen consisting of one cockerel and three pullets of any one of the above breeds for ten new subscribers.

If you can spare a few hours it will be to your advantage to try for one of these special premiums. Let us hear from you.

Barred Plymouth Rocks
White Plymouth Rocks
Brown Leghorns
White Leghorns
White Wyandottes
Buff and White Orpingtons
R .I. Reds

The MARITIME FARMER

Sussex, New Brunswick

The Tuberculin Test.

Subscriber, Hants Co., N. S.—QUE. How is the tuberculin test conducted? Is milk from an infested cow considered safe to use?

ANS.—The Tuberculin test is conducted as follows: The tuberculin can be got from the Department of Agriculture, Ottawa. The temperature of the cow is taken and recorded 3, 6 and 9 hours before injection. The seat if injection (neck and shoulder) is disinfected with a 5% solution of creolin. About 60 drops of the dilute tuberculin is injected with a hypoderinc syringe. In 9 hours the temperature is taken, and then every three hours for 18 hours.

If the temperature increases 2 degrees or over above the highest point reached before injection, she is tubercular. If increase of temperature is noted she is free from disease. The milk from a diseased animal is not considered safe to use.

A Mating Query.

NOVICE, N.S., QUES.—Will the FARMER please tell me how long the male bird should be with the flock of hens before the eggs will be suitable for hatching?

ANS.—Authorities agree that four days after mating males with hens the eggs will be fertilized if the birds are adapted to one another. It is safer to have them mated a week and even better to have hens and males acquainted for several weeks by allowing brief runs together. When the male takes a dislike to one or more females confined with him, it will be best to remove offending hen or hens from the pen, in order to avoid having infertile eggs.

Making Butter For the Overrun.

The overrun from cream is usually about 18 per cent and 100 lbs. of cream testing 24.5 per cent fat should make about 29 lbs. of butter. If you get the overrun for making the butter, you would receive 29 minus 24.5 or 4 1-2 lbs. of butter per 100 lbs. of cream testing 24.5 per cent fat. If butter is worth 30 cents per lb. you will receive $1.35 for making 29 lbs. of butter, which is at the rate of 4.6 cents per lb. for making. If the price drops then the amount received for making will be less. You can easily calculate what it will cost for butter at any price by multiplying the lbs. of overrun by the price per lb. of butter.

N. S. Farmers in Annual Convention.

(Continued from page 235)

with ragwort, therefore we, the Farmers' Association, in session at New Glasgow, recommend that the Dominion Government, having already done considerable work along the line of investigating the noxious weed question, be memoralized through our federal representatives, requesting that board to establish an Experimental Sheep Station somewhere in Eastern Nova Scotia, with a view to stimulating the sheep raising industry.

F. C. LAVERS,
W. J. WALSH,
ANDREW MCPHERSON,
PROF. M. CUMMING.

Resolved that this Association request the Department of Agriculture to prepare circulars, giving the life history of the harm done by and the best methods of exterminating the destructive insects and fungus diseases in our province, and circulate the same among the farmers through the County Associations and Agricultural Societies.

Invitations for the 1911 meeting were received from Yarmouth and Windsor and the matter of choice was left with the executive.

After votes of thanks were extended to the various persons, who had helped to entertain the Association, the convention, which was a success in every respect, came to a close.

FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N B.

Easter Flowers.

Easter is a festival which seems not to have been properly observed unless church and home have been decorated with beautiful and seasonable blossoms. This association of Eastertide and flowers grows stronger from year to year, and with each new season the markets are taxed more and more to fill an increasing demand. Many persons willingly deny themselves little luxuries for weeks ahead that they may be able to purchase some potted favorite for their homes at Easter.

The Easter Lily is queen of the flowers at this season and her pre-eminence is never questioned. The popularity of the Lily for church decoration never wanes, but rather grows greater and greater from year to year. Lily culture has become a very important department at all modern conservatories and the greatest care is taken that the plants shall bloom just at the proper time.

The Rose is another flower that is always a favorite and for which there is always a steady demand at Easter. This year very large orders are being taken for the various varieties.

Carnations of every shade and color hold a high position in the popular esteem, not only on account of their natural beauty, but because of the exceptionally long time that they keep fresh and sweet.

One of the loveliest and sweetest flowers that is procurable at Easter are the English Violets. There are many who would prefer a bunch of Violets to a dozen of the choicest Roses procurable. If it is allowable to speak of fashionable flowers, the Violet is greatly in vogue at present. Another great favorite is the Lily-of-the-Valley, with its pure white blossoms. The delicate perfume is more suited to the house than many others, so this Lily and the English Violets are sold a great deal together for personal use.

The great masses of flowers raised at this time are intended for church decorations. All the above flowers find a place in the altar decorations, as well as the Hyacinths, the Tulips, the Arolias, the Daffodils, the Primrose and the Spireas. Hundreds of these blooms, potted and cut, are used to beautify our holy churches for the grand festivals.

A look through the hot houses of any of our florists just now is enough to make one decidedly envious. Everything is at the height of its beauty, creating a most beautiful effect.

FERNS, A., writes: To settle an argument, please tell us the difference between the Whitmanii and the Pearsonii Fern, if any.

The Pearsonii was sent out nearly ten years ago by the T. R. Pearson Co., of Torrytown, on the Hudson, it being one of the earliest permeated sorts from the Boston Ferns. It is of course habit with a decided tendency to revert to the parental type. The Whitmanii is a somewhat later production of H. H. Barrows, of Whitman, Mass. It is of fine, compact habits, seldom shows any tendency to revert and is a very satisfactory house Fern. The Pearson Co. have a very similar Fern (Superbissima) that is a far better Fern than the old Pearsonii, which, by the way, is practically out of existence to-day.

READ WHAT

Dan Barker, of Mill River, Inverness Co., N. S., says

About the Magnet

"I have been farming for 25 years and my average herd of milk cows was from 11 to 12, last year it was 8 but with the help of the MAGNET Cream Separator we made more butter from 8 cows than we ever made from 12.

"Our little girl nine years old runs the milk through the MAGNET"

"Signed
DAN BARKER,
Mill River,
Inverness Co., N. S.
Jan. 28, 10."

Write or Call on

The Petrie Manufacturing Co., Ltd.,

149 Prince William St., ST. JOHN, N. B.

Montreal, Hamilton, Winnipeg, Regina, Calgary, Vancouver.

YOU NEED A BUSINESS EDUCATION

If you wish to remain on the farm you need a thorough training in Bookkeeping, Rapid Figuring, Arithmetic, Writing, Letter Writing, English and Banking.

NO FARMER CAN BE REALLY SUCCESSFUL, who lacks this practical commercial training.

Do You Want to Enter the Business World?

You must have a thorough business training. We offer you, right AT YOUR HOME, a MORE COMPLETE BUSINESS EDUCATION than you would get at any Business College, and it will cost you about 1-3 as much. Read the following testimonials from one in your own part of the country. THIS IS PROOF.

Qualified for a Position

Parkdale, Lun. Co., N. S., July 4, 1907.

GENTLEMEN:—

It is with pleasure I state my perfect satisfaction with your course in Shorthand and Typewriting. I have found your study papers amply lucid, without sacrificing, in the least, the essential quality of conciseness. I have pursued the course with increasing interest and pleasure, and now find myself QUALIFIED FOR A POSITION IN AN OFFICE AT ABOUT ONE-THIRD THE COST OF A RESIDENTIAL COURSE.

Wishing you continued success and many students, I am,

Sincerely yours,
VERNON B. RHODENIZER.

Placed in a Position

Winnipeg, Man., Oct. 12, 1907

GENTLEMEN:—

I beg to advise you my address is changed from Parkdale, Lun. Co., N. S., to the above, for the present.

You will pardon me for neglecting to inform you of my successful location before.

I arrived in Winnipeg Saturday, August 24th, started work Tuesday, 27th, on the strength of your letter of recommendation alone, not even having to show my diploma.

THANKS TO YOUR EXCELLENT TRAINING, I am filling a position in C. P. R. office at $55 00 per month, even though they use the Empire Machine, while I learned the Underwood.

I CAN TAKE MY NOTES WITH EASE AND SHALL ALWAYS BE GRATEFUL FOR YOUR VERY EFFICIENT TRAINING. With best wishes, Yours respectfully,
VERNON B. RHODENIZER.

What we have done for MR. RHODENIZER we can do for YOU.

Write to day for our booklet on "Commercial Education"—it will give you full particulars. Address:

SHAW CORRESPONDENCE SCHOOL,

393 to 405 Young Street, - TORONTO, CANADA.

PURE BRED POULTRY
BARRED PLYMOUTH ROCKS
WHITE ORPINGTONS

We have the finest strains in North America Stock and Eggs in season.

ENIVAR POULTRY FARMS,
Lansing, P. O., Ont.

The PUBLISHER'S DESK.

HONEST VALUES.—We draw your attention to the advertisement of J. H. Connor & Son, Limited, of Ottawa, Ontario, in this issue. Mr. J. H. Connor, over 30 years ago, to supply a local demand, commenced the manufacture of a Washing Machine. The line was gradually added to until to-day their business reaches from coast to coast, and they have a variety of a dozen different styles of Washers and over thirty varities of Wringers. The success of the firm is due to the high quality of goods which they turn out, and their guarantee to give satisfaction in every instance. They have a well established reputation for "Honest Values" and we heartily commend them to our readers.

HOW TO BUY WIRE FENCE.—The great enemy to long life in a wire fence is rust. Examine some of the fence in your neighborhood and you'll find that in most cases where it has broken down rust is the cause. The galvanizing on a wire fence should protect it from rust. It will do if it is the right kind of galvanizing. The Banwell Hoxie Wire Fence Co., Ltd., Makers of Peerless Fence, believe that their fence will last longer than any other fence made. They believe this because they have put the wire to the most severe tests, and it has stood them all. In fact, they are so confident that the galvanizing on the Peerless Fence will protect it from rust and corrosion that they are willing to send anyone interested a sample of their wire and a simple formula for testing it. Anyone thinking of buying a fence should write the Banwell Hoxie Co., Limited, at Hamilton, Ont., and get this formula, than they can know if the fence is going to wear before they buy.

THE BEST TRAIN SERVICE AT REASONABLE RATES.—"Collier's Declares I. C. R. Dining Cars Preach a Sermon.—The Canadian editor of "Collier's" in last week's issue, thus sums up the advantages the people are receiving from the Government operation of the Intercolonial Railway The last thing a people-owned railway should try to do is make money. It should give good service, run fine passenger trains, charge reasonable freight rates and seek to pay expenses. All this the Intercolonial does. Even its deficits are to be counted to it for gain They show that it is not robbing the people to fatten balance sheets. The Intercolonial is an object-lesson in altruism to other railways that are not managed on such high principles It is a good thing and our own, and Canada does not want to part with it. Even its dining-cars preach a sermon, which is that, in these days, when meat is a luxury for the rich and butter is worth its weight in gold and eggs are more precious than rubies, the best table d'hote dinner on the continent can be put up for a dollar.

STATEMENT BY MR. DYER.—My attention has been called to a recent article in a New York daily newspaper which has been widely copied, and wherein it stated that the future of the phonograph was not very bright. This article is entirely misleading and does not accord in any way with the views of myself or anyone connected with the Edison Companies. The future of the phonograph was never so bright as at the present time: in fact I feel that the surface has hardly been scratched. Orders are coming in so rapidly at the present time that we are not able to fill them promptly and the sales are entirely satisfactory. The fact that we are just starting in with the Amberola and a full line of Grand Opera Records is certainly an indication that so far as we are concerned the future does not have to be questioned. If any one of us had the slightest doubt as to the future of the business, why should we be spending hundreds of thousands of dollars each year in advertising and a corresponding amount in the development of new lines and in experimental work? In connection with the very article under consideration, it is interesting to inquire why, if Mr. Edison has any doubt as to the future of the business, he should be willing to spend $155,000.00 in cash to acquire a minority stock interest? The whole transaction was simply this, that in the early days of the phonograph business this particular minority block of stock of the Edison Phonograph Works was acquired by outside interest, and was later put up as collateral to secure the issue of bonds of another independent company (not controlled by Mr. Edison) having rights in certain foreign countries, and on which the interest payments were defaulted. These bondholders were anxious to realize something from their investment and Mr. Edison was willing to buy the stock, so that the transaction was consummated. The Edison Phonograph Works, as persons familiar with the business know, is a separate company located at Orange and engaged only in the manufacture of machines, which are turned over to and are distributed by the National Phonograph Company. The National Company manufactures all Edison records and sells directly to the trade. The National Company in assets, property and amount of business done is immeasurably larger than Edison Phonograph Works. The purchase of this block of stock by Mr. Edison was a personal matter and has no direct bearing on the phonograph business, other than showing his confidence and a desire to withdraw the stock from litigation.

POUNDING THE INTERCOLONIAL.—A most extraordinary and incomprehensable event during the past fortnight was the motion of Dr. Black, in the House of Commons regarding the I. C. R. We have never been able to understand why these attacks on the efficiency of the Intercolonial should be made from time to time. Whether it is that the Government are anxious to get clear of the road and are preparing the public for it by letting the backbenchers criticise the management, or whether the backbenchers do it of their own initiative, we have no idea But we know that if the average small shipper through the country, and the jobbing trade at the distributing points along the I. C. R. only appreciate how much better service they are getting not than they would ever be likely to get from a company-owned road, they would not sit passively back and let this sort of thing go on.

Mr. Carvell, speaking on the question in the House of Commons, spoke of the freight rates from St. John to a certain point west as compared with the rates from St. John an equal distance east. And it is not only a question of cheaper rates, but passenger service as well. We doubt very much if there is a country of similar population anywhere on this side of the water with a better passseger service relatively than we enjoy in the Maritime Provinces. We are quite willing to admit that a Government owned road has not the same free hand in building up industries along the way as a company-owned road; but it has other compensations. We should like to see the other trunk lines getting running powers over the I. C. R into the province of Nova Scotia, but we do not believe in abandoning the railway—that is, unless it can be shown to be a hopeless failure and a burden on the country.

As for the present management of the I. C. R, under the Commission, we have taken pains since the beuinning of the year to make enquiry among people who come close in contact with the railway at nearly every point from Halifax and St. John to Montreal, and the universal opinion seems to be that there has been an improvement. Why then should any of our own local members seek to "knock" the I. C. R.? There is no answer that we can think of. We might understand this in a Western man who does not come in contact with the direct benefits of the road, and has not a full understanding of the value of it to the country. But in a Maritime man it seems almost unpardonable.

We have no serious transportation problems in the Maritime Provinces. If we had such problems for marketing goods as are met with the far west of Canada and in the Western States, where people can only get their products out over one line of railway, we might have something to complain about. But in these provinces, where our staple exports are apples, lumber and fish, if need be we are independent of railway people altogether.

There is nothing that we have said to leave the impression that we are against the entrance of company-owned roads in Nova Scotia. On the contrary we would welcome the C. P. R. and every other road that could get running rights over the I. C. R. And we dare say that if the C. P. R. eventually comes to Halifax, this will be the way by which it will come.—Maritime Merchant.

Shoe Boils, Capped Hock, Bursitis are hard to cure, yet ABSORBINE

will remove them and leave no blemish. Does not blister or remove the hair. Cures any puff or swelling. Horse can be worked. $2.00 per bottle, delivered. Book 6 D free.
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Buy direct from the producer and save the middlemen's profit. We are large growers of Celery, Cabbage, Beets, Carrots, Parsnips etc We ship to all the Maritime Provinces and have supplied critical buyers in Montreal and Toronto with our celery and other vegetables. They say our celery down by the sea has a flavor not to be had elsewhere.

J. J. GAY & SON,
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are swinging stanchions. See the comfort and freedom they give cattle. Are strongly made to stand roughest usage, and save lumber and labor in fitting up cow stables. Saves time in trying cattle, because the latch is easily operated and absolutely secure. Made in five sizes. Write for catalogue and prices.

A. M. RUSH,
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Preston, Ontario.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS. St. John, N. B

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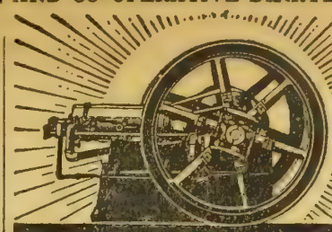

THERE'S no doubt about it. Thousands of farmers have proved and are proving every day that one of the simple, dependable I H C gasoline engines makes and saves more money for them than the best hired man they can get.

Don't let the up-to-date farming ways get away from you.

You can make your I H C engine work when and where and as long as you please. It is something you can own. It is all yours. You don't have to talk to it about getting up early or argue about quitting time. It is always ready and willing—just as well pump a tank full of water after dark as in the daytime. It is ready to start the saw, pump or any other machine going before daylight, if you are.

If you have a full day's work for it at grinding, you will get more out of it than you would get out of a half dozen hired men It's just the same with all kinds of work. Your I H C gasoline engine will work with all your machines—will push them—keep them going steadily—make them really valuable to you. You have nothing to pay it in wages; no fear that it is growing tired and thinking of quitting you. Its only requirement for its faithful service all day—every day or night—is a small amount of oil and gasoline.

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The I H C gasoline engine is the latest and one of the greatest real aids to the farmer. You ought to have one for your steady hired man. Thousands are going out on the farms. There are many styles and sizes, from 1 to 25-horse power—an engine for every section and every problem, for all farm uses—vertical and horizontal (both stationary and portable) engines on skids; sawing, pumping and spraying outfits. It also includes gasoline tractors—first-prize-gold-medal winners—the best all-'round farm tractors.

Call and take the matter up with our local agent in your town. Or, write the International Harvester Company of America at nearest branch house for catalogue and further information.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

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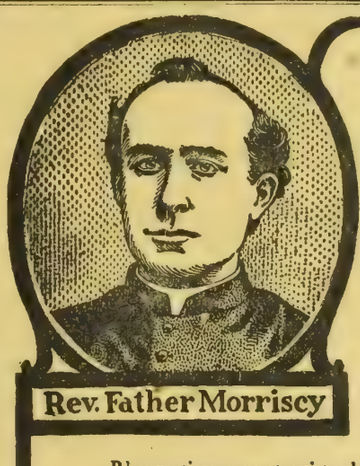

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647 Main St., St. John, N. B., Nov. 27. 1908.

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I am writing to tell you I have been a victim to Rheumatism for several years, and have been treated by seven doctors without finding any permanent relief until I got Father Morriscy's medicine. It has cured me so I am able to do my work and find I am as well as ever in my life.

Yours truly,
JOHN CRAWFORD.

Rheumatism cannot exist when the kidneys are in perfect working order for then they take out of the blood all the Uric Acid, which alone causes the Rheumatism.

Father Morriscy's "No. 7" Tablets

act directly on the kidneys, toning them up and helping them to clear the blood of the Uric Acid. If the Rheumatism is of long standing it may take some time to clear out all the poison, but almost from the first "No. 7" Tablets relieve the pain, and if used faithfully they rarely fail to cure.

Even if other remedies have done you no good, do not give up till you have tried Father Morriscy's "No. 7" Tablets.

50c. at your dealer's. 27

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SHORTHORN BULLS FOR SALE.—WALTER E. EATON, Upper Canard, Kings Co., N. S.

WANTED.—Hides, calfskins, sheep and lamb pelts. J. J. McLEAN & SONS, Hopewell, N. S.

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THREAD POWER FOR SALE.—Two horse Moody Thread Power, in good condition, for sale on easy teams. Write POWER, care of MARITIME FARMER, Sussex, N. B.

CANADIAN POULTRY REVIEW 48 to 72 pages monthly. Bright, practical, fully illustrated. Every department in charge of a specialists. 34th year of publication. 50c a year, 3 years one dollar, anywhere in Canada, outside Toronto. Address Toronto, Ont.

MALE HELP WANTED.—Wanted by April 1st, man to work in small orchard in Wolfville, Kings Co. Must understand care of fruit trees and grading. Highest wages paid to the right man. Apply Box 26, Bridgewater, E. PERCY BROWN.

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MONEY MANUFACTURED.—The progress now being made by Canadian manufacturers and merchants should be taken advantage of. Write for information about a safe, quick way of doubling your money. Address ROBERT E. KEMERER, Confederation Life Building, Toronto.

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Eggs for Hatching from

Houdans,

Silver Grey Dorkings,

R. C. Rhode Island Reds.

Our yards contain birds of show quality and high individual merit.

Book your orders early.

W. J. M. MacLEOD,
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LOCH LOMOND, WEST, N. S.

Incubators For Sale.

The Hartland Poultry Yards are selling incubators and brooders. You will want one of these machines, if you are going to hatch chickens this season. Send for catalogue, it is free.

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Ayrshire bull fit for service. Forty Ayrshire calves, Ayrshire females any age. Thirty-five head to choose from. Intending purchasers met at railway depot. Book orders for Chester White swine. Long distance phone in residence.

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One pure bred bull 8 months old. one pure bred heifer 8 months old, one pure bred heifer 2½ years oldt one pure bred cow 4 years old. The first two are sired by Emma's Fashion. The last two are in calf by Emma's Fashion. Apply to

CHAS. B TAIT,
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Jersey Bull For Sale.

I have for sale one nice two year old Jersey bull. He is a grandson of Hood Farm Pogis 9th. Correspondence solicited.

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FOR SALE.—Registered Shorthorn Bull, fifteen months. Color, dark red; weight, eleven hundred pounds.—ISAAC CHIPMAN & SON Chipman Corner, Kings Co., N. S.

WANTED by middle of March or sooner, a smart, trusty man for general farm work. Must be steady and agreeable Will hire for eight or nine months. Will pay good wages to such a man. H. B. SCHOFIELD, Lakeville, N.S.

CLYDESDALE ASSOCIATION OFFICERS.—At a recent meeting of the Clydesdale Breeder's Association held at Toronto, Mr. W. W Black was elected delegate to the St. John Exhibition and Amherst Horse show. Following are the officers of the Association, President, Mr. John Bight, Myrtle, Ont.; Vice President, Mr. Robert Graham, North Toronto; Mr. Peter Christie, Manherst, Ont.; Mr. Robert Ness, Howick, Que. The directors are all Ontario Men.

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FOR 1877 - - - -	$65,154.00
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Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09.

No. 1 Stallion.—Dam, Soubrette, Imp., by Laborl, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

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Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

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Opportunity for Breeders

Of the Maritime Provinces to secure breeding stock from the best herds, studs and flocks of Great Britain and the Continent of Europe by direct importation, without expense of special trip and at minimum cost.

An importer and dealer of many years experience is prepared to fill orders for all classes of stock, subject to inspection on arrival by officials of the Provincial Departments of Agriculture, delivery upon conclusion of inspection and quarintine. No inflated prices but turn over made as low as quality of stock will permit. Horses, Cattle, Sheep or Swine bought as orders may be received. Reference from prominent stockmen and officers of the British War Office may be seen at the Department of Agriculture, Fredericton. Correspondence solicited. Address

A. H. THOMSON,
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We are ready to quote lowest prices on new Model Incubators and Brooders. We also have some second hand Machines, guaranteed in first class order, on which we are quoting a low figure.

Our specialties in eggs for hatching are B. P. Rocks, R. I. Reds and White Pekin Ducks.

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Wish - Ton - Wish Stock Farm.

HOLSTEIN CATTLE,

We are offering two young bulls from six weeks to two months, and one fit for service by late summer or early fall.

HARDING BROS., props.,
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Do you want a bull from a high testing dam? The great grand dam of the bull we are offering was the noted Sadie Vale Concordia and the eight nearest related females of his sire had an average record of twenty-seven pounds butter in seven days. This bull was sweepstakes bull calf at the Fredericton Exhibition in 1907

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Volume 15. Sussex, N. B., March 8, 1910. Number 11.

The N. B. Farmers' and Dairymen's Convention.

THE thirty-fourth annual meeting of the New Brunswick Farmers' and Dairymen's Association was held in Fredericton, N. B., on February 21st, 22nd and 23rd.

The opening meeting was held on Monday evening, in Church Hall, with President O. W. Wetmore in the chair and the seating capacity of the hall taxed to its utmost limit.

President Wetmore, in his opening remarks, outlined the programme for the farmers' deliberations and laid particular stress on the deviations from previous custom by the addition of live stock demonstration lectures and judging classes and also the Provincial Seed Fair, which he trusted would open up avenues as sources through which farmers could procure reliable seed in years to come. He had travelled through the counties bordering on the Upper St. John river and thought it a lamentable fact that dairying was so much neglected in those counties. He had found nearly every body raising potatoes. He expressed the opinion that live stock raising and systematic rotation of crops must be carried on if one wishes to maintain the fertility of his soil, and if the up-river farmers paid more attention to the latter, they could, at least, raise enough grain for the home supply. Shortage of help and expensive mill feeds were some of the detriments to dairying on an extensive scale, but the latter could be greatly ameliorated by growing more roots. Long hours were also a detriment, but in cases, where it was necessary to occasionally work long hours, the employer might take turns with his hired help and by using them right—by using them as men—there should be no great deal of trouble along that line. Depleting the fertility of our soils, by careless farming methods, was a crime and should be prevented and cured as rapidly as possible by intelligent dairying and a rotation of crops, in which clover played an important part. He would like to see several experimental farms in New Brunswick, well managed by some of our own boys, who have taken courses at various agricultural colleges. The taking up of depleted farms and upbuilding them in such a way that they would furnish a good living for an average farmer, would do an unestimable amount of good as object lessons for others, possessing similar farms, to follow. He questioned the advisability of following a specialized system of farming in New Brunswick and went on record as being favorable to a general system, with, perhaps, a little specializing along one or more lines. He would not advise farmers to follow the system of "putting all their eggs in one basket." Some counties paid dearly by following such a practice. Illustration or model farms would solve the problem of getting settlers for our vacated farms. Our farmers want something in the line of practical work and not too much of the theoretical. The application of common sense soil management and hard work, to most of our farms, would bring success in its train, without having to resort to drudgery and would very materially assist in developing all our resources.

Mayor Chestnut welcomed the delegates to Fredericton and expressed the confidence that they would go back to their homes, after the sessions were ended, better equipped to deal with the various problems, which they would encounter. He was glad to state that matters were pointing to a practical solution of the transportation problem in the long-suffering St. John River Valley.

Dr. Landry, Commissioner for Agriculture, was present and expressed his pleasure at seeing such a large gathering of farmers and trusted that in future years delegates would look back with pleasure to these meetings. It was, indeed, a note of progress to have such a delegation from all parts of the province. The general response showed a willingness to co-operate in making the respective associations represented a success. As the head of his department, organization was his watchword. The number of agricultural societies in the province was rapidly increasing. There was room for at least 150, and although the Government grant to agricultural societies had already been increased from $8,000 to $10,000, he was of the opinion that it must be increased this year to $13,000. "The farmers' call" can not be slighted and they must get their share of the Government funds to carry on the promotion of the interests of their profession. Every community of farmers should cast any petty differences aside and band together for their mutual welfare and he went on record as to assure them that any reasonable requests from them to his department would be granted. When farmers would band together in this way and notify his department that "Our district wants so and so," then the Commissioner can boldly stand up before his coleagues and say "the farmers want this and their call can not be refused." While some farmers and their sons had taken advantage of the opportunity to attend the Nova Scotia, St. Anne and Guelph Agricultural Colleges, the numbers were not up to his expectations. Young men, and old men, too, should attend those seats of learning. There they learn to know their profession. Young men, who are planning to remain on their farms, should make a special study of farming and crowd to those institutions in such numbers that the colleges would have their utmost capacity and then we might look for a college of our own. The Commissioner approved of the idea of demonstration farms and trusted that ere long he could arrange for one at Fredericton, where the present U. N. B. College professors could be utilized to assist in the work. He referred to the success of New Brunswick fruit at the London Fruit Exhibition, where it had captured a gold and three silver medals. He thought if farmers would pay more attention to judicious general farming, and less to specializing, there would be fewer disappointments. He explained the negotiations his department had conducted re helping New Brunswick potato shippers to gain a market for their produce in Havanna. He thought the change in the programme, to include practical demonstrations, would be interesting and welcomed by the majority of the delegates and concluded by saying that as the Farmers' Association was the connecting link between the farmers and the Department of Agriculture, he would welcome any suggestions they might offer from time to time.

AGRICULTURE IN OUR PUBLIC SCHOOLS AND COLLEGES

was the theme of an interesting address by Mr. W. S. Carter, Supt. of Education, who referred to the intelligence that the farmer must put into his work to drive away the drudgery that was so commonly associated with the industry in years bye gone. As everything comes from the land, the attention of every one, who desires a compitency in old age, is being turned to the farm. In the past, people, in their ignorance, thought they knew all about farming and laughed at scientific knowledge and, in their blindness, robbed the soil of its richness. Views re this matter had been changed and now the farmer realizes that he must be the best educated of men. Book farming is no longer ridiculed, as the theoretical and practical work hand in hand. Farmers, who are not striving to educate themselves re the most approved methods for conducting their operations, are dearly paying for their ignorance.

Schools and colleges had done a great deal in the past and will do more in the future, as education assumes more practical tendencies. Learning by doing was the type of education that did the most good. Agriculture, as taught in the schools in the past, had no practical application, but now school gardens and other practical work was giving it a more useful aspect. Indeed, if it only taught them the need of a war on weeds and moths, it will pay the province to establish school gardens all over the province. In Manitoba it is estimated that the loss due to the pressure of undesirable weeds would pay the cost of public education many times over. If farmers were more liberal with their children and gave them an opportunity to help in conducting the business affairs of the farm, there would not be so much discontentment. Where the farmer follows the practice of forming a joint stock company with his sons, he has little or no cause for complaints if he uses his boys right.

The Superintendent advocated the establishment of model farms all over the country, where boys could learn the principles of modern farming, and fathers should give their boys some land and some stock with which to apply these principles on their own account. While New Brunswick has the need for a more extensive system of practical education, it has not the means to carry on the work as extensively as one would wish. School gardens and nature study, as now presented to teachers in training in the Normal School, would have a tendency to give the pupils a bend towards rural associations. Mr. Carter thought it might be a good idea for the Government to rent a farm and have it conducted by an expert, where the boys and girls, from several school sections, could congregate for practical demonstration work. The farm should be worked in a manner suitable to the district in which it was located. The benefits accruing

from such a training would be: habits of neatness, arrangement, observation, physical work, love of home and training for industrial life. Noxious weeds and insects pests were yearly becoming more numerous while there is getting to be a scarcity of birds. Agricultural Societies might offer prizes for essays on the eradication of weeds and the Department of Agriculture might offer prizes to boys and girls who get the first brown tail moth nest in their district.

In order that a boy or girl may be the most successful in fighting the battles of life it is necessary that he or she know a smattering of everything and everything of something. A good common school education was a good foundation on which to build.

Mr. Carter outlined the advantages of a consolidated school. The extra cost to maintain them was insignificant in comparison to the gains in affording better opportunities for promoting a more and varied practical system of training. The people bred in and trained by the conditions of country life were the backbone of the nation, its stay in time of war and the source from which the cities derive fresh blood and continuous moral uplift.

THE FARM RESOURCES

was the theme of a well thought address by Mr. R. P. Steeves, Inspector of Schools for Kings Co., who may be termed the "Agricultural School Inspector" from his deep interest in a practical agricultural training for boys and girls. He took the soil as the principle on which he based his address and subdivided it under the three headings: Its fertility. Its productions and Its people. He considered that New Brunswick was as fertile as any country that lies out of doors. The resources of its marshes, river valleys and hillsides were the finest that any country could possess.

The problem of the conservation of these resources was largely a problem of education. In some parts of the province, however, where at one time flourishing settlements and large schools exhisted, the scene has been changed by injudicious farming methods that have so depleted the soil fertility that many of the land owners, particularly the younger people, have now moved away and the scene is now a picture of "the deserted village" and not infrequently the schools are closed. The strength of a country was its population and our schools should be the salvation of our country. Had the farmers of the district referred to had sufficient education to realize that a proper system of farming would have maintained the fertility of their soil, their farms would be to-day flourishing as of yore and they would not be so prone to tell their sons that it would be advisable for them to get an education that would fit them for some other walk in life than farming. These farmers did not realize the possibilities or dignity of their calling. During the first six years of its life, a child receives its education in the natural, easy way of asking questions, but when it goes to school he has to assume a different method of acquiring knowledge and the change is so abrupt that the child very often rebels. Our present system of education does not follow the natural process which enabled the child to learn so much during the first six years of its life. A system more in harmony with nature and its ways should be adopted by teaching more nature study and thus enable the child to study the object Our school readers should contain more articles of a rural character and thus help to put our children in closer relationship to the soil out of which all must derive sustinence.

Education should be more specific for general information has lost its value. Give a young man an education equivalent to passing an examination for a second class teacher's license and if he has no other ties he will be away from the farm in less than six months.

Arethmetics for use in rural schools should contain practical farm accounting as every farmer should keep accounts.

It was the back settlements that suffered the most from depopulation and therefore their needs should be promptly attended to, by introducing systems of education, that will give the boys and girls a more general interest in their surroundings.

A teacher for agriculture should be in every grammar or high school in every county so that a greater number of our young people would be lead to prepare for agricultural colleges instead of to colleges that very materially assist them to look to distant fields for their livehood. We should strive by every possible effort to build up our home country before we go afield.

TUESDAY MORNING.

On Tuesday morning the farmers met in the Arctic Rink, where Professor Cumming gave a most instructive and interesting address on "The Relation of Cattle Raising to Fertility of the Soil." He pointed out the need of giving greater attention to cattle raising, and explaining the various points and characteristies of cattle suitable for dairy purposes. Although the weather within the rink was of a somewhat arctic nature the professor held the attention of his audience for nearly three hours, and judging from the questions put to him and the animated discussion at the close, managed to convince many of the farmers that the problem of raising both dairy and beef cattle demanded more study than it has received in the past, and offered possibilities of greatly increasing their earnings.

In opening his address Prof. Cumming declared that the main reason why farming in the Maritime Provinces was not as profitable as it might and ought to be, was that our farmers were not obliged to make farming a paying business. Many did not even realize the possibilities of proper farming methods, and gave more attention to lumbering and fishing than they do to their farms. As a result they had impoverished their lands, and were turning longing eyes to the west. But the fact was that the land of the Maritime Provinces was, in most sections, just as fertile as the lands of the west, and, with the adoption of efficient methods of farming, would yield as large returns as the lands of most countries.

The farmers' policy of cutting hay for export, which prevails so largely in the Maritime Provinces was a great mistake. Nothing impoverished the soil so quickly; even wheat raising was not so fatal to fertility because the straw was left behind and returned many needed elements to the soil.

The right policy was to feed the hay to cattle and horses and so make possible the returns to the soil of those elements taken up by the grass. By proper handling of the manure, the farmer secures a return to the soil of 90 per cent of the fertility which is embodied in hay.

Men who raised hay for export were not farmers at all—they were simply land miners, robbing the soil of its producing properties.

"According to the census of 1901," the professor continued, "the area of the farming lands of the Maritime Provinces was about 10,000,000 acres. In this area, which of course only represents a small proportion of the land available for cultivation, the farmers kept a herd of about 650,000 head of cattle and other live stock. This gave one head of cattle to every 16 acres of cultivated land. In Denmark the farmers find that it pays them to keep one head of live stock for every 2 1-2 acres of land. In Ontario, where the relation of cattle raising to the fertility of the soil had been recognized for some years, the farmers maintained one head to every 5 acres. On the best paying farm in that Province there was one head to every two acres.

While the question whether a farmer should specialize on raising beef or dairy cattle would be determined by local conditions, it was well to bear in mind that the dairy business presented great possibilities. In the Maritime Provinces there were in 1901 a little over 300,000 milch cows; and the production of milk averaged about 3,000 pounds per cow.

If the farmers of these Maritime Provinces kept as many cows as the preservation of soil fertility demands, the annual output of our dairies could be increased at least eight times—say to a value of $80,000,000 per year. And that is only a very moderate estimate; at any rate Denmark, which is no bigger than New Brunswick alone, does a dairy business aggregating over $100,000,000 a year.

"Too much emphasis," continued the professor, "cannot be laid on the fact that the policy of raising cattle and other live stock not only provides a means of assuring the salvation of farming in these provinces by preserving the fertility of the soil, but also offers tremendous possibilities of achieving such a measure of prosperity here that the west would lose its attraction for our young people, and even for a considerable number of the immigrants that come to our shores.

The professor then proceeded to describe the various features and characteristics that distinguished cattle suitable for dairy purposes from those which were mainle suitably for fattening for the beef markets. He demonstrated his points by reference to the cattle which have been loaned to the Association for this purpose.

Cattle suitable for milk production could readily be distinguished by a man of experience. In form they were invariably wedge-shaped as viewed from the front and top, narrow at the withers, with the vertebrae somewhat higher. Their stomach was equally large, and the chest was proportionally deep, and with no depression behind the shoulder blades. The udders were wide and long, and fairly deep, though not pendulous.

Good dairy cattle are active, vigorour, and in temperament are inclined to seriousness, though they are neither irritable nor vicious.

The Professor declared that, contrary to general belief, the heavy feeder was usually the best for dairy purposes, giving a persistently large supply of milk of a high quality. Speaking of the type of bull needed to breed cattle for dairy purposes, he said farmers usually selected bulls with heavy hindquarters, and a general aspect of burliness. This was a mistake. The good dairy breeding bull, like the good dairy cow, was characterized by an angular formation in general.

BEEF CATTLE.

On Tuesday afternoon Prof. Cummings gave a demonstration of the methods of judging beef cattle, and pointed out the characteristics that should be considered in breeding cattle for the market. The Maritime Provinces were breeding large numbers of what he called "dairy steers"—a type of cattle that would never make good beef however much they might be fattened.

Cattle that made good beef were deep and broad, and built on the lines of a parallelogram generally. Their shoulders were compact and broad on top, and covered with flesh well laid back over the ribs. The chest was deep and broad; the ribs long, well arched and thickly fleshed. Their body was more like a barrel than that of the milch cow.

The Professor claimed that if the farmers made a point of studying the characteristics of beef cattle, and then made a point of breeding with a view to developing such characteristics, the results would be infinitely more satisfactory to them and the meat consuming public.

TUESDAY EVENING.

After the meeting was called to order on Tuesday evening Mr. W. A. Walsh entertained the audience by giving several readings from Drummond's Habitnt. Drummond's readings are always appreciated and Mr. Walsh can give them in good style.

COUNTY VICE PRESIDENTS REPORTS.

CARLETON COUNTY.—The past year has been rather a prosperous one when we consider the amount of rain that fell.

We who live along the St. John River had the water over the lowland all summer, but the good prices received for the produce raised on the farm has helped the farmers out. I hope something will be done to help the farmer along agriculture work and that our country and people will be thus helped on to prosperity.

C. L. SLIPP.

CHARLOTTE COUNTY.—From a farmers standpoint the past season cannot be called a satisfactory one to Charlotte County farmers. In certain districts turnips are the staple crop. Farmers are finding it more difficult each year to grow turnips of the desired quality, and this winter there is no sale for them at paying prices. The potato growing fever has also struck certain districts and many farmers have paid out a great deal of money for commercial fertilizers. There is evidently a good opening for potatoes if we develop the trade steadily and do not make it our main crop. This winter the prices are poor and some of the farmers already feel discouraged, but every cloud has its silver lining. However, I am glad to be able to state that along educational lines we have made good progress during the past year. Our local institute has been working in a quiet, effective way and I am most pleased to report that a strong lusty youngster has developed in the Charlotte County Agricultural Society which held a most successful Country Exhibition at St. Stephen last fall and also held under its auspices, a series of farmers' meetings throughout the county, which were well attended and much interest was manifested in the subjects discussed. The majority of our farmers recognize that they have not been making the progress they should and are quite willing to adopt any other system of farming which will give better results.

J. R. OASTLER.

NORTHUMBERLAND CO.—The crop throughout the county the past season is as follows: Hay, a fair crop; oats, good; wheat, fair; buckwheat; a fair crop, potatoes, a good crop, but have not and are not keeping, being very badly affected with rot. In many cases where 100 barrels were housed, ninety per cent went bad and were unfit for use. The very wet fall is accountable for the rot. Turnips a good crop and so were carrots, beets and mangles.

The Seed Fair held last spring by "The Northumberland Agricultural Society No. 90 was a sccess. Many lots of good-seed wheat, oats, barley, buckwheat, peas, beans and potatoes were exhibited in the different classes and scored very high and exhibitors in general were pleased with the results.

The same Society conducted a standing field grain competition with very satisfactory results. About thirty farmers of the county entered into competition and the score ran as high as ninety-four points in a possible hundred. The scores equal the best and are very much better than many throughout the province of Quebec and the other two Maritime Provinces At this competition, the first of its kind conducted in the Province, it was shown, that the farmers of the County of Northumberland are not neglecting to take advantage of up-to-date methods when assisted by the Department of Agriculture and to endeavor to produce in their own county as good, if not better, seed grain than any other more favorable districts throughout this great Dominion of ours.

In some districts in the county efforts are being made by the more progressive farmers to obtain better stock. In the Parish of Blissfield, the Northumberland Agricultural Society No. 81 have been using their funds for the past few years in importing pure-bred stock. Their last purchase was a Short Horn bull. They are endeavoring to get the farmers to make use of pure bred sires to build up their stock which hitherto has been ordinary scrubs.

At down river points or that part of the county east of the town of Chatham bordering on the Marimichi many farm-

ers are making use of mussel deposits in the river and bays, with splendid results. Particularly good results have been obtained when this fertilizer has been applied to clay and clay loam soils. But as the means used in raising the mud and mussel deposit is by horse power, during a short period in the month of March, only a few farmers whose farms are situated on the banks of the river and shores of the bays, are able to secure this valuable fertilizer, where as, if a proper power plant with suitable scows by which the mud could be raised and delivered at a smaller cost at several points along the river or put on cars, it could be shipped to any part of the province. This would necessitate the assistance of the Department of Agriculture, in order to bring this fertilizer to a price which would pay the farmer to use it.

It is regrettable to state that many of our young men are going to the United States instead of settling down on the land. It is hoped that steps will be taken to encourage these young men to settle down in their native counties.

R. A. MURDOCH.

ST. JOHN CO.—Representing, as I do, one of the oldest sections in this province and situated at the most important busines centre, we note to a greater extent, perhaps, than others further remote from that point, the importance the farmer plays in the export business of this country. And the question naturally arises: Are the farmers of New Brunswick taking advantage of the opportunities of the present age by raising more dairy products, beef and poultry, that are required by the changed conditions of the last ten years? To see the carloads of beef and pork products brought in from other provinces, and keeping in view the prices asked for poultry, I think my question will have to be answered in the negative.

We hear a good deal of the high cost of living; then note the number of ocean steamers that come and go from St. John weekly during the winter months and it is readily seen where our surplus supply of farm products disappear.

And we, in New Brunswick, are not keeping abreast of the times. We have a market but that market has to send outside our province for a large part of the supplies that should and could be raised here in our own province.

But to get back to our Agricultural Societies, for, if we had no Agricultural Societies we would have a poor convention our three Agricultural Societies in St. John Co. are doing work in their respective districts. We have one at St. Martins, one at Loch Lomond in the Parish of Simonds, and the one I have the honor to represent, City and County of St. John

We still assist our members in procuring pure bred stock and the best seeds obtainable and make importations from year to year but find our Biennial Fair our greatest drawing card. It is our main-stay, for interest in our Society, and it is our principal means of sustaining our membership. We lost an important factor when our Institute meetings were discontinued and hope some substitute will be provided to fill this large gap. If the Societies had the means, they might well take this question in hand and give to the different sections of their counties the needed advice, adapted to their particular sections by practical men. But with our greatly decreased Government grant this matter is not in our power and it seems that if the appropriation for Agricultural Societies is not increased it will curtail to a larger extent the work for which our societies were organized.

This year, as you are all aware, the Dominion Exhibition is to be held in our City, and on behalf of the Agricultural Society of the City of St. John, we invite the members of this Convention to visit our county. Come as exhibitors if possible, and combine business and pleasure. We want to make our live stock and agricultural departments truly New Brunswick. We have the stock in the province, and, as for agriculture, no province under the sun can excel us if we take the necessary labor and care. With a greatly increased premium list you do not have to take the increased trouble for honor alone. Again, I say come, if not as exhibitors then as sight-seers, and enjoy with us the best exhibition that a bigger and better St. John ever had.

FRANK V. HAMM.

SUNBURY COUNTY.—Root crops gave a good yield of fine quality. Potatoes were affected by the rot in some districts; this, however, was not general. Turnips were a heavy crop, with an increased average being grown, both for feeding and market.

Grain crops were good, but some difficulty was experienced in harvesting, owing to the continued wet weather. Hay was short in some sections of the county.

The experimental orchard, in my section of the county, which has been managed according to instructions, is doing exceptionally well and demonstrated that apple trees, properly handled, are a success in our county.

The market gardeners, along the river, are making a success of that line of farming.

A Cow Testing Association has been formed and is doing good work. No doubt, in a few years, good results will be obtained from this branch of the dairy work and I would strongly advise anyone, who keeps cows for profit, and who wishes to improve their herd, to try the weighing and testing of each cow's milk at least three days in each month.

To-day we read and hear much about the increased cost of living in the cities and we are led to ask ourselves, does the farmer get the benefit of the increased cost of the products of the farms to the consumer in the city? I think not. In most cases some have to look elsewhere for a solution of the problem and we turn to the souless transportation companies and the middle men. The local freight rates, on company owned railways, are responsible for about one-third of the value of produce shipped, and, in some cases, more. The small farmer is practically prohibited from shipping in small lots and is thus placed at the mercy of the middle men, who buy and ship in car lots when they, too, are compelled to pay rates out of all reason.

I believe it is in the interest of the farmers that we should have Government owned and operated railways in this country. Last year, in my report, I mentioned the need of the farmers being able to have telephones in their homes at a reasonable rate. I am pleased to note the agitation in St. John for an independent company, whose benefits, I hope, will be extended to the farmers in the rural sections of New Brunswick. M. A. SMITH.

GLOUCESTER COUNTY.—In submitting a report to the Farmers' and Dairymen's meeting, as Vice-President for the County of Gloucester, I am pleased to be able to say that the future hopes of our farming population are bright and cheerful.

The crops, generally, last year, were very good, especially can this be said of the potato crop, which was one of the largest in the history of our county. This crop suffered slightly from dry rot, but this was only noticeable in one or two districts. The efforts made to secure a market for the potato crop of the St. John River Counties could be, with profit, extended to Northern New Brunswick and it is to be hoped the Department of Agriculture will not lose sight of this point.

Our hay crop was somewhat more than the average and was all saved in excellent condition. Oats, in some sections, was light, but in general, the crop was a good one.

Our two cheese factories, one at Petit Roche and the other at Bathurst Village, were in operation last season and turned out a good quantity of excellent cheese, considerable of which readily found a local market at good prices.

The future for agriculture interests in this county is a hopeful one. Great activity in the development of the large mineral deposits, lately discovered, both in the upper and lower parts of Gloucester County, will give a new impetus to the farmers, who see a more ready and better home market for their products.

Several new agricultural societies have lately been organized in this county, as a result of the visit of representatives and experienced speakers, sent by the local Government.

STANISLAS DUMAS.

MADAWASKA CO.—The spring season of 1909 was very late. The first grain was sown about May 24th.

On the lowlands, the hay crop was a full average. On the uplands, the cut was very light. The weather was such as to give the farmers a chance for storing the hay almost all in good condition. In the first part of the fall, hay was worth about $11.00 per ton. In December it was worth from $14.00 to $16.00 per ton. Harvest time was very late on account of the rainy weather.

Only half of the oat crop was housed in good condition. It is supposed, though, that a fair average crop has been obtained. The best quality was worth 50 cents a bushel.

Generally speaking, potatoes and turnips turned out fair crops. However, complaints were made of a smaller yield of potatoes than the preceeding year, and in some sections, considerable rot was found at digging time. Both crops were sold from $1.00 to $1.25 per barrel.

Lamb, beef, butter, eggs and milk sold, all season, at high prices in local markets.

Our County needs government imported horses, both road horses and draught horses, so as to improve the breeding. If a part of the sale of those horses was made no further down than Woodstock it would be a great accomodation to our farmers.

B. R. VIOLETTE,

YORK COUNTY.—The principal crops of this county are, hay, potatoes and turnips, all of which were damaged to considerable extent by the excessively wet season. Highland hay was about 20% of a full crop but island and interval hay was up to the average.

Rot affected the potato crop and caused considerable loss. From over twenty fields examined in different parts of the country I have concluded that the rot was due to excessive rain, the only land not affected was the very porous soils that allowed the water to drain off quickly.

I might also state that these farmers who have sprayed thoroughly, the great majority at least, are convinced that the rot was greatly checked by so doing.

Turnips were a good crop but on heavy land the quality was poor and they find a very slow sale in Boston.

Much grain was lost at harvest time. In many fields the grain sprouted and it was almost impossible to get it threshed. The yeild was very good where the grain escaped the rain, fifty bushels of oats and twenty-five to thirty of wheat were obtained.

In live stock, can report little progress, except in draft horses. Clydes and Percherons are being used for sires and there is a steady improvement in size and quality of farm horses.

High prices of raw products, the last few years, have greatly affected stock keeping, and commercial fertilizers are being freely used instead of manure. This, to my mind, is a short-sighted policy as this last season has shown. It is hard enough on the man having good shipping faulities to get rid of stuff on a poor market, but what of a man who has a long expensive haul to market, and who has contend with low prices, etc. when his fertilizer bill is a heavy cash outlay?

I trust something may be done to stimulate dairying in this section. Cattle, generally, are kept in a wretched condition. As a rule, they are thin in the spring, when they calve, and it takes all summer to get them in any kind of condition, as feed fails in the fall they go off in flesh and get barely a maintenance ration all winter.

A keener interest in stock raising would greatly affect pork production and increase the fertility of our soil in the only and sane way.

S. B. HATHEWAY,

VICTORIA.—In making an estimate of the material and social condition of any community, the most important item in the calculation is that of health. No community can be prosperous and happy if the conditions under which they live are not favorable to the enjoyment of good health. Good health must be reckoned among our assets when taking account of stock. In this connection I have to report that several sections of the county during the summer and fall of 1909 suffered from a general outbreak of typhoid fever, the origin of which was traced, in the most of cases to impure water. The province is generally supplied with pure water and the possibility of its becoming contimated was never seriously considered and our people became careless and neglected to give the sources of their water supply the attention it deserved. This neglect brought about serious results, and has emphasized the importance of every community giving carefully, intelligent and scientific attention to keep the water supply for domestic purposes free from contamination. This lesson should be heeded by every section of the province.

Boards of Health should take practical means to disseminate information among the people as to the best way in preventing the spread of contageous diseases and in the looking after the wells and streams from which the water supply is obtained, and if necessary in certain sections to have a health officer appointed to see that sanitary conditions are complied with. The board of education should see that the important subject of physical culture and health instruction gets its due share of attention in our schools. Eternal vigilance is not only the price of liberty but combined with scientific knowledge it is the price of health and the immunity from preventable diseases including the much dreaded scourage of the white plague.

The past season has been a rather disappointing one to the farmers. So much depends upon the weather conditions over which he has little or no control that "his best laid schemes gang aft a glay and leave him not but grief and pain for promised joy." Owing to the dry weather in the first of the season the hay crop was injured and the yield was below the average, and owing to wet weather at the last of the season the potato crop was much injured and in many sections they rotted badly and caused many farmers to doubt the value of spraying to prevent rust and rot. It is said that good farming consists in raising big crops and leaving the land better than it was. The farmers of Victoria County used last season in the neighborhood of 50 or 60 thousand dollars worth of phosphate and the land may be in good condition for the crop of 1910 but the potato crop will not pay for the phosphate bill. The land may be the richer but the farmers are poorer, and the fact remains that the potato crop has put the farmers into a hole and they will have to wiggle out as best they can, and yet the potato crop is one of the most profitable crops the farmer can raise. The shippers and the Government are trying to induce the farmers not to be discouraged as there will be a new market for potatoes when the Cuban market is captured. But the farmers better do a little thinking on their own account. Artimus Ward did not object to his cow kicking. He thought she had a perfect right to kick, but what he did object to was her putting so much expression into her kick. Our farmers have simply put too much expression into their potato crop.

Perhaps the most prosperous section of the county is the Danish Settlement where they give good attention to the dairy cow. They bonus her with good feed and attention and if they cannot sell their potatoes they can feed them to the cows.

The wheat crop was an average one. Early oats were a good crop, and the buckwheat was nearly up to the average. Root crops of all kinds were

good. The apple crop in some sections was good, in others not so good.

The supply of stock in the county is now very small excepting perhaps that of horses, of which there are several good Clyde sires and a few Clyde mares.

I do not know to what extent the instruction in our schools tend to interest the children in farm work and country life, and will assume that all is being done in that direction that public opinon demands, that practical work ithrough the medium of school gardens is not yet attempted, even the school garden in connection with the Grammar school at Andover, that was so successfully introduced by the McDonald movement was not operated last season. The experiment of having a little practical agriculture taught in our common schools has not yet had a fair trial and the effort in that direction should be continued. While ideal conditions in many branches of our agriculiural work, may not exist, yet the county is progressing and many evidences of progress is visable in all directions. To the enterprising man, whose only capital is his labor, this country offers encouraging inducement. We have 50,000 acres of wilderness land in the centre of the county awaiting settlement, which, owing to its location, should very largely eliminate the hardships connected with pioneer life. The lumber interests give employment in the winter season, and when our water powers that are now attracting the attention of capitalists are utilized, new industries willl be developed. With the northern part of our province, which is now opened by railways in course of construction, we may naturally look for development and growth. Let us hope that agriculture will be the chief and leading industry.

G. E. BAXTER.

AGRICULTURAL SOCIETIES—THEIR WORK AND THEIR RELATIONSHIP TO THE DEPARTMENT OF AGRICULTURE.

There are some people, who state that agricultural societies are of no benefit to either their members or the province. And perhaps the history of occasional societies would justify such a sentiment, if one or two societies were singled out. However, we must not judge all the societies, or the possible value of the efforts of any society, by the few failures that are made. Much to-day is said about the value of co-operation, and co-operative societies throughout the world have demonstrated the value of the association of men engaged in one line of business for their mutual benefit.

To be entirely successful, our agricultural societies must be, first of all, co-operative. As was stated so well last night, any individual, who wishes to get the most out of life, must first adopt the principle of giving, and the more he will give to society, as a rule, the more benefit he will ultimately receive. If we acknowledge, and I think we must, in the light of the experience of the last twenty years, of the results of co-operation in different countries, the benefit of co-operation, we must then admit the benefit of the principle underlying the formation of agricultural societies. It is not essential that co-operative associations should be incorporated under the Agricultural Act or any act. It is by no means essential, nor is it always desirable, that they should receive Government assistance.

For many years ithas been recognized by the Government of the province, and apparently with the approval of all classes of its citizens, that co-operation among the farmers should be encouraged and sums of money have been annually appropriated to encourage this.

The regulations of the Act, under which our agricultural societies are incorporated, state that the object for which the societies may be incorporated shall be as follows: "The encouragement and promotion of improved methods of dairying, of the breeding of improved stock, of improved methods of fruit raising, and of improved methods of agriculture and horticulture; the dissemination of literature and other inofrmation relating to agriculture and stock raising, and generally the promotion of agriculture." And the regulations go on to say: "The societies incorporated under this Act may hold meetings for discussion and for hearing lectures on subjects connected with the theory and practice of agriculture, improved husbandry and kindred arts; may promote the circulation of agricultural and horticultural periodicals, or periodical devoted exclusively to stock raising; may import or otherwise procure seeds, plants and animals of new and valuable kinds; but this shall not extend to authorized societies to traffic in ordinary seeds, or to procure animals already in the district in which the society is located; may offer prizes for essays on agriculture, horticulture, dairying, fruit raising, stock raising; may award premiums for excellence in stock, agricultural products, fruits, vegetables, plants and flowers, and generally for the excellence in any agricultural or horticultural production or operation."

While it is very desirable that the largest possible measure of home rule should be allowed every society and every facility given for individual effort and the development of the society's work for the special benefit of the district in which it is formed, it is yet essential, if the greatest value is to be secured, that the efforts of all societies should be along some definite and systematic line.

Some of our societies appear to think or act as if the holding of an exhibition was the only work for which they were incorporated. The Act, from which I have quoted, does not bear out this idea; the holding of an exhibition is the last thing mentioned.

Stated, generally, the objects of our societies should be the development of agriculture in its broadest sense.

At the meeting, last evening, it was clearly demonstrated that one reason that agriculture was not as prosperous as it might be, in this country, was because of the lack of conception of the opportunities available to our people in their own localities. As was so well stated, we have, here in the province of New Brunswick, opportunities unexcelled, so far as agriculture is concerned, by any part of the American continent. We hear much about the opportunities of the West. I will venture to say that if either the province of Saskatchewan or Alberta had this province set down in their midst, that they would be ten times as enthusiastic as they are at present over their country. If our province, with its climate, with its water supply, with its ability to grow nearly all the crops and fruit involved in the highest type of farming, with its magnificient lumber supply and other resources, it would be found to be so superior to the country already there, that we would never hear the end of it.

It seems to me the first work for our agricultural societies to do is to increase the faith of their members, and particularly the boys and girls of the district, in their own country and to show them the opportunities for development, to show them that they can make more money, that they can live better lives, have more real pleasure from living right here in New Brunswick than can be obtained almost anywhere else. So, then, it seems to me, the first duty of agricultural societies is education—such education as can be had from lecturers, from experts in various lines of farm work, from demonstrations in field work and in the judging of live stock and from distribution of the best agricultural literature. No agricultural society is doing its full duty to the district in which it exists, unless it is taking some interest in the schools, where the farmer receives his first education. Prizes might well be offered for the best papers or essays written by school children, in regard to agricultural topics, that are particularly applicable to the district, and interest should be taken in a school garden.

Second, the next work that follows in agricultural improvement, in any section, is the procuring of the best seeds, at the cheapest rate, and assisting society members to have these seeds tested. Good crops and prosperity all come from good seeds—good seeds lay at the foundation of successful agriculture.

Third, as live stock must play an ever increasing part in the improvement of agriculture in this province, the procuring of the best breeding stock is a most important work.

Fourth, in some sections where special crops are grown and where considerable quantities of commercial fertilizers can be advantageously used, a society may save a great deal of money for its members and insure honest treatment for them by purchasing fertilizer ingredients or mixed fertilizers, properly compounded and brought subject to test.

Fifth, encouragement may also be lent to the growing of good crops, destruction of weeds, proper methods of cultivation, etc., holding standing field crops competitions, as was so well done by the Northumberland County Agricultural Society last year.

Sixth, to complete the work, so far as the actual business of farming is concerned, the next step in co-operation will be the marketing of the products, and very great benefits can be conferred upon its members by co-operative systematic marketing, and I can see no objection, whatever, to our agricultural societies being used in that way.

Seventh, the work of the farmers of the district may be encouraged and the district itself afforded a pleasant holiday by the holding of an exhibition. When an exhibition is held, it should be made as educative as possible, expert judges and every facility, for all, who wish to see the judging and hear the explanations as to why one animal or one product is better than another, should be provided. Those societies, which are using their funds merely to provide a holiday for the district, to bring trade to a local centre, and, as sometimes happens, incidentally to distribute the prize money to a few people, who organize and manage the society, are not fulfiling, either the letter or the spirit of the Act and should not be entitled to any share of the Provincial money. The exhibition should be, not the foundation, but the coping stone of the agricultural society structure, if the society is to do the most good, and when well managed, may be made of great benefit to everyone. It may be, that in certain localities, that the holding of an exhibition for a few years may precede and make possible other activities by raising a general interest in agriculture. Time will not permit a discussion on the exhibition question, on which there are many opinions—but I have just thrown out the above views that they may be debated and the united wisdom of all interested be obtained. My views are suggestive and not conclusive and anything that I have here stated is not to be taken as an official statement of the position of the Department, but, rather, as my personal contribution to the debate.

The Agricultural Department exists at the pleasure and for the benefit of the farmers of the province and it must be conducted in accordance with their wishes, as expressed in various ways. There can be no dictatorship in this democratic country. The people have the power to say what they want and to enforce it.

As the Department exists at present, it is extremely desirous of knowing the wishes of the people and of working in harmony with their wishes and doing anything that can properly be done to assist in the general development of the province. So far as the relationship of the Department to the various agricultural societies is concerned, it exists for mutual help. It is necessary that the business of the societies be carried on under certain rules and regulations to safeguard the expenditure of public money and to best insure the benefit of the membership. And while, as I have stated, it is extremely desirable that the largest possible measure of home rule should be given to every society, it is those societies which conduct their business in a systematic way and work in harmony with other societies and with the Department, that will be most likely to achieve the best results.

I would like to see every society visited by a representative of the Department once in each year, for the purpose of inspection of work, audit of accounts and mutual discussion for future efforts.

CO-OPERATIVE POULTRY ASSOCIATIONS.

Following Mr. Hubbard's report, Mr. Geo. E. Baxter explained the operations of co-operative poultry associations and expressed the wish that ere long several such associations would be organized in New Brunswick in connection with some of the most progressive agricultural societies.

President Wetmore explained the methods followed by the Clifton Society in buying fertilizing ingredients for home mixing and also in the buying of seeds.

Mr. Holder then gave some banjo selections, after which Mr. Bliss Fawcett read an interesting paper on

"CAN FARMING BE CARRIED ON IN NEW BRUNSWICK WITHOUT LIVE STOCK,"

which will be published in next issue of the FARMER.

Mr. J. R. Oastler, who followed in the discussion, referred to the decrease in wheat fields of the West, where cropping practices were carried on, consequently little or no profit can be derived by selling crude products, when soil depletion is taken into consideration. Success with commercial fertilizers might hold good for a while, but we, in New Brunswick, have reached the stage where we must look more to our live stock for maintaining the fertility of our soil; but we must not keep them for necessity; we must keep them for profit.

S. L. Peters thought New Brunswick farmers should get back to conditions of twenty-five years ago, when farmers kept cattle for fertilizing purposes and for profit. The farm that carried as many cattle as possible was always successful. Twice as many cattle were kept in Queens County as there is to-

(Continued on page 291)

SEED OATS.

Start in right now as a seed grain grower. Use every care in preparing the soil. Procure some of our Regenerated Banner Scotch grown Oats, and you will find that not only will you increase your yields by 10 to 30 per cent. as our last year's customers did, but also will your neighbors come to you each season for your seed, and pay you high prices. It costs no more in land, labor, horse flesh or machinery to grow our best seed than common run-out seed, but the prices and yields obtainable are very different. We offer these oats, while the stock lasts, freight paid, at **$1.50** per bushel, in 5 bushel lots. Bags free. Send for samples also catalogue.

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Below find our present prices for guaranteed **No. 1 Government Standard** Clovers and Timothy, delivered, freight paid, at your nearest station, provided you order 200 lbs. or over. Bags 25c each extra.

Send for Samples.

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Geo. Keith & Sons,
124 King St East., - Toronto
Seed Merchants since 1866

MAPLE SYRUP AND SUGAR MAKING

BY PRACTICAL MAKERS

The maple leaf has been emulated for years in song and story and holds the proud distination of being one of the emblems of Canada. The tree itself is a source from which valuable lumber is procured. As a furnisher of heat what can surpass good dry maple wood? What is more beautiful than the leaves of the maple when they present innumerable tints of green and gold in the autumn? When the first settlers of Canada wished to taste some of the sweets of life how they used to look forward to the sugaring season, for from it they must, of necessity, procure their sugar supply. Is it therefore any wonder that a tree possessing such virtues should be emulated by our predecessors?

In response to a request for contributions on maple syrup and sugar making the following interesting articles have been for warded to us:

SUGAR MAKING BY MODERN METHODS.

In sugar making local conditions make a difference, trees situated on high land with a northern aspect do not get ready to run sap so soon as those on lower land with southern exposure. The "bush" in question has the latter location and by the way the trees have been tapped for eighty consecutive years by father and son, first with an axe and gouge and an old fashioned wooden spout, with birch-bark receptacles to catch the sap, then after being gathered and hauled by hand on a toboggan to some central situation, 40 and 60 gallon pots were filled and hanged on cranes over a hugh open fire and the boiling process was gone through with. Now everything is changed.

Any time after the tenth of March, sometimes before and sometimes not until the fifteenth, just according as the weather is spring like with cold nights and days that the snow is thawing or the reverse. We make ready to begin the operations by washing our buckets which have been piled in the camp separate and bottom up since the spring before, and scattering them through the woods one to each tree. Our storeage tubs (galvanized tanks are better) are thoroughly washed and scalded and set in place, smoke stack put up, evaporator, (we use the Champion, manufactured by the Grimm Co.) placed on furnace, then everything is ready for a flow of sap.

The first fine morning that the trees are thawed sufficient for the sap to start two men begin the tapping. A 7-16 bit is used to bore a hole from one and a half to two inches deep. A Grimm tap spout, No. 2, is driven in gently until it fills the hole nicely so there is no leakage. Tapping operations are hurried as much as possible while the sap is running, but not otherwise, if the sprout is driven while the tree is frozen leakage is sure to follow from the splitting of the wood under and above the bore hole.

Next comes the gathering, a tank holding three barrels is firmly placed on a sled drawn by a pair of horses and the work begins. Two men, with pails holding eighteen quarts, take each a side of the road and the woods are quickly gone over. The feeding tub being full, connection is made with the evaporator, fire started and as soon as possible the sap is turned into syrup. It is very important in making a prime article not to allow the boiling process to linger. The syrup is boiled until it will test 13 lbs. 2 ozs. to the gallon then put in tins holding one gallon each. If candy is wanted we further reduce the syrup until it will stick to a ball of snow and and when cool break with a crackling sound, it is then dipped into firmly packed and smoothed snow allowed to cool and placed in boxes made of birch-bark when it is ready for market. If sugar is called for, the syrup is treated in the same way only instead of putting on snow we take the pot from the fire and and after allowing it to cool some time stir the contents until it grains when it is ladled into tin boxes holding from 1-4 to 1-2 lbs.

MRS. WM. FULTON,
West Brook, Cumberland Co., N. S.

Coming In With a Load of Sap

Scene at True Hodgson's Sugar Camp, Collingwood Corner, N. S.

Watching the Candy Pot

The Old Way and the New

Eating Candy off the Snow

THE MAPLE SUGAR INDUSTRY OF THE PAST AND PTESENT.

For many years the sugar industry of Eastern Canada was carried on in a very primitive manner. Tradition says that the Indians first discovered the art of making maple sugar. In the earliest stage of this industry the rock-maple was tapped with an axe and gouge. A wooden spout was then driven to convey the sap to the bark placed at the foot of each tree for storage purposes.

In those days the sap was gathered and put in a small tub, then drawn to the camp by hand and boiled in large pots holding from thirty to sixty gallons each.

About twenty-five years ago an iron spout was invented, which made tapping much easier and saved much sap that was wasted by the old method. The trees are tapped with a bit and the spouts driven until the shoulders fit tightly to the bark, to prevent leakage. The spouts are equipped with a wire hook to hold a tin bucket in which to catch the sap, which is a great improvement over the barks used in former days.

About thirty years ago pans were invented in which to boil the sap; they rested on arches built of stone, and were considered superior to pots for boiling purposes,

Five years later evaporators were manufactured which boil the sap much quicker, with less wood and modernized the sugar industry to a large extent.

In these days spouts coated with tin are used, being less injurious to the tree than iron spouts. Most of the sugar makers of today use evaporators manufactured by the Grimm Mfg. Co. or some other up-to-date firm. They are built of tin and rest on a steel arch lined with brick and are so arranged that the sap can be boiled down to syrup thick enough for market. This syrup, when boiling, registers 220° by a thermometer and weighs 13 lb. 2 oz. to the gallon.

If the operator desires to make sugar he puts the syrup into a kettle which he has for the purpose, resting on a steel furnace and a small fire will boil it down thick enough for candy and sugar.

When the boiling liquid will register 240° the kettle is removed from the fire, and if candy or wax is to be made, he either pours it on hard snow or into tins or barks used for this purpose; these are set away to cool. In making sugar the liquid is allowed to cool until it thickens a little, it is then stirred and put into moulds. The large tanks for holding the sap and other utensils made of tin make the sugar of today much purer and lighter in color, and it demands a ready sale in all the markets of the Maritime Provinces.

RICHEY F. SHIPLEY,
Fenwick, Cumberland Co., N. S.

GUARANTEED PURE MAPLE PRODUCTS.

In order to make good maple honey or sugar, it is necessary to have a first-class equipment. Everything with which the sap comes in contact should be made of tin or metal. In the sugary it is necessary to have a sap spout and sap bucket for each tree tapped and a team of horses attached to a wooden shod sled to draw the gathering tank around when collecting the sap. I find that it takes a man to every thousand trees or buckets.

I have my sugar house so arranged that, after the sap is in the gathering tank and hauled to the reservoir above the sugar house, that I do not have to handle it again until I draw it out of the evaporator, ready for bottling or sugaring off. I use three strainers in connection with the manufacturing of maple honey, the last used being a white felt strainer, made for the purpose. It is essential to have a large sap holder at the sugar house for holding the sap as it is gathered from the trees. It is always best to keep all the sap outside of the boiling room and for this purpose make some kind of a shelter in which to store the sap until it is transferred to the evaporator, as I find the boiling room too hot for it. It is necessary to keep it as cool as possible, to prevent souring.

After the sap is boiled into honey, it is drawn off into a settling can or tank, to settle and cool for bottling or putting into cans for the market.

I find it best to use the old iron pot for the sugaring off process. I have tried the small arch and tin pan and had no success. Some claim it to be all right, but every man to his own fancy.

When selecting a site for a sugar house, a side hill should be chosen, so that the gathering sled can be driven to an elevation at the side, high enough for the sap from the gatheaing tank to run into the sap holder by its own gravitation and then from the sap holder to the evaporator. The house need not be expensive, just a plain building, the size being regulated by the number of trees and size of the evaporator. It should be well lighted and ventilated. The ventilator should be about the same length as the evaporator, put in lengthwise of the ridge, and should be of large dimensions, so that the steam from the boiling sap can readily escape.

The evaperator should be made from a heavy grade of tin plate. There are a number of modern evaporators, each company claiming to have the best, but the choice must be left with the purchaser. One of sufficient size to do the work, with the least amount of fuel and labor, should be selected.

It is very important to have the outfit of a capacity greater than is necessary for the number of trees tapped, as the trees are steadily on the increase in growth and new ones are coming on. When I purchased my equipment, a few people thought I lacked good judgment in selecting so large and expensive evaporator, but I knew my own business the best, as I have since conclusively proved.

I use the Champion evaporator, manufactured by the Grimm Mfg. Co., Montreal, and it has given the best of satisfaction, for as I said before, when the sap leaves the gathering tank for the evaporator, I do not have to handle it again until I draw it away from the evaporator, ready for the market. My aim is to make one of the purest and best grades of maple products among my brother sugar makers. I do not say that I make the best, but I like to come

(Continued on page 2.9.)

Lunching Outside the Camp Door

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser be said :—**"I saw your adv. in the MARITIME FARMER."**

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The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

MARCH 8, 1910.

Dates of Issue.

March.... .... - 22
April..... .... - 12-26

POPULARIZING FORESTRY.

In the discussion which followed the reading of a paper on "The Lovers of Out-of-Door Life and the Forest" by Mr. L. O Armstrong, Colonization Agent of the Canadian Pacific Railway, before the Canadian Forestry Association at Montreal in March 1908, Rev. T. Hunter Boyd, of Waweig, N. B., a valuable contributor occasionally to the columns of the MARITIME FARMER said:

I have just one word to say on a matter to which I think further attention might be called in Mr. Armstrong's paper, and that is the allusion to the children. Possibly owing to the fact that this Association meets in a mercantile centre, and in a building devoted to the interests of business, it may be that the other end has not received the attention it deserves. I believe the Board of Directors of this Association has under its consideration a scheme of bringing these matters before you, and before the boyhood of this country.

"Dr. Fernow in his address at the Canadian Club suggested three aspects, the old timber, the young growth and the forest covering. I suggest that many of the aspects brought up appertain to the old growth. There is an increasing attention to the growth coming on, but in relation to this we should take it as a symbol that the forest cover should be considered in respect of the very infancy of this country's resources fifty years hence, there is another thing to be thought of, and without presuming to offer anything in the nature of a resolution, I would ask to be allowed to emphazize the aspect brought up recently at the meeting at Ottawa, that the Association inaugurate steps looking to the popularization of printed material which is now available for its members and others, and very especially, that as soon as possible an attempt be made to bring this matter before more of our people than the University students. It is, I understand, already in use at the University, of Toronto, and will be introduced this summer in New Brunswick. But that is not enough. A short course should be arranged for our normal colleges and brought before Teachers' Institutes throughout the Dominion with the splendid illustrative materials that is available in the older countries. Whilst we do not advocate the preparation of a great exhibit, we do not advocate that all children in Canada should be asked to do what Sir William Macdonald and Dr. Robertson suggested in respect to seed grain, that they should be taught to know and love the work which will result in making two bushes grow where before there was but one. They started with a very crude test, only a matter of co-relation and co-ordination with what has been done in other departments of horticulture and I trust this popularizing of the movement Dr. Fernow is associated with, and which at present makes us all look to Toronto University, as we cannot to any other place in Canada, to give information in a good, direct form, in small doses, to children, will be carried on in Canada. This will do much more good than the issuing of any amount of information in newspaper paragraphs or in the literature of your Society. I would suggest that a move be made to emphasize this aspect of the educational work which has already been so ably dwelt upon by Mr. Armstrong in his paper."

Dr. Fernow who followed Mr. Boyd in the discussion said:—"With regard to the education of the young, I would like to say a few words to plead guilty of misconception in former years. I am a professional forester and when I started on this propaganda I supposed I was appealing to men and that they were the proper people to secure the proper methods of treating their own property. If I had ever thought that it would take twenty-five years to make as short a step as we have taken in that direction I should certainly have favoured beginning at the schools. At every meeting in the early history of the Association there was sure to be somebody who said that what we wanted to have in the nation must first be put into the schools. That is a good German philosophy, and it was resolved that the Association should instruct the young in the schools, and there was a sort of idea that I was the man to prepare the text books. I always refused to do this, first because I was not capable of writing such a text book, and secondly, because while public schools were hardly able to teach the necessary subjects satisfactorily, it would hardly do to put another subject into the curriculm, like Forestry.

"Since then I have found that in a country of dempcratic Government, to secure any action, first public opinion must be formed, and the school furnishes a remarkably satisfactory place in which to begin to form public opinion. The only trouble with the proposition is the difficulty of method. We cannot introduced the subject as a separate study, but occasional talks from the teachers are properly advised. And I think in this direction this Association is perhaps not doing its full duty by merely meeting once a year and publishing a report, and in addition publishing a journal which comes out only quarterly, to be put upon the shelves without reaching the large reading public which we want to get at, or even the teachers of the country. I hope that during the next year the Association will attempt to carry out Mr. Boyd's suggestion, and the University of Toronto in its Forestry Faculty will be anxious to assist in the propagation of such common sense literature as may be used to reach the young. I sincerely hope that during this year the Association will take some steps to secure a wide distribution of such material."

LET FARMERS ADVERTISE.

If a man is about to start in the mercantile, manufacturing, or almost any other business, the first thing he does is to advertize. He goes to his local paper and inserts an ad. announcing his business intentions and when and where he expects to do business. When he is established he makes his business known to the public by displaying his goods and wares to the very best advantage possible and does all he can to call the attention of passersby to his display; and everybody knows the advantages derived from this expense and trouble.

If it did not pay to thus advertise, merchants and others would have stopped it long ago. If it pays in all other kinds of business to advertise why not in farming; but how many farmers advertise?

"Oh," they say, "it costs money." Very true, but it also brings money; and besides it need not cost so very much, after all.

The best advertising medium of the country, of course, is the newspaper; but there are other ways that are very beneficial and comparatively inexpensive.

A merchant places over his door or in some conspicuous place a sign with his name and business in glaring letters. If that is an advantage to him, why should not the farmer follow suit? Is not his business as important and as honorable as any in existence?

Let every farmer have some appropriate name for his farm. That is the first step towards advertizing. A name once selected, let him put out in some conspicuous place a signboard with the name of the place at the top, either painted or printed on cardboard. Below this let him advertise from time to time whatever he has to sell or wishes to buy, either on printed cards or written on the smooth board with a croayon in large, plain letters that can be readily read by passersby. Such a bulletin board will be found of great value if intelligently used by the owner. A few placards with the different products which the farmer is likely to have for sale can be procured at a slight cost and may be made to last for a long time if put out in their season and then taken in and laid away for another season.

There are several devices for displaying such cards. Let each farmer use his judgment as the best method, but by all means name the farm (your business) and then advertize in some way the produce of that farm.

THE NEW BRUNSWICK PROVINCIAL SEED FAIR.

It has been customary for a number of years to hold seed fairs annually at Woodstock, Chatham and Sussex. A departure was made this year from the usual routine by holding a provincial seed fair at Fredericton.

The fair was held on Wednesday, the 23rd ult. while the Farmers and Dairymen were in annual session. Had it been held on the day following or preceeding the sessions we believe it would have been a decided advantage to both exhibitors and visitors. As it was the farmers were so engaged with their regular convention meetings that they could not attend the seed fair, and as a consequence the greater percentage of the delegates did not see the seed fair, and those who had seed grains to offer for sale did not find it as good a selling medium as they expected. As an educational feature we believe, one day could be very profitably spent at the seed fair, by all the delegates. There they could be instructed in seed judging and listen to instructive addresses on seed growing and selecting in its various phases. We know Inspector S J. Moore could have spent an afternoon with the farmers and would have made matters interesting for them had he had the opportunity. We trust that if only one fair is held next year that arrangements will be made for one day especially devoted to it without any counter attractions, otherwise we believe more good can be done by holding several smaller district fairs. Indeed we believe the latter method would give the best results. We expected to see a much larger seed fair at Fredericton than was found there, we have seen larger local shows. The exhibits, however, were of high quality. Mr. S. J. Moore, who judged the exhibits spoke very highly of the quality of the exhibits and made the statement that with a little more attention to selection the time should not be far distant when the importation of seed grains from abroad should cease.

Maple Syrup and Sugar Making.

(Continued from page 267.)

up as near to the standard as I can and I guarantee all my maple products genuine.

ORINGTON McKEEN,
Kingsclear, York Co., N. B.

THE MAPLE SYRUP INDUSTRY.

It is to the maple tree that we are indebted for one of our rarest luxuries. The maple holds a most prominent place among the various other species of New Brunswick trees and yet the maple syrup industry is one, as yet, little considered by New Brunswickers as a source of livelihood.

The most important consideration in this industry is, of course, the orchard or bush, as it is sometimes called, and its situation. Although a southern slope, on raised land, is preferable, it is not in our power to turn the hills and swamps around and up as we would like them, so we must take them as they are and receive good dividends on the amount invested and the labor spent thereon.

In the manufacture of maple sugar and syrup, from a financial point of view, there are two points of importance that will be necessary to remember from the first and these are : We must make a first-class article that will assure a good price when placed on the market. Failure is sure to overtake the man that takes up this industry with the expectation of finding it all fun, unless he is one of the few, who considers unceasing labor and endurance a pleasure.

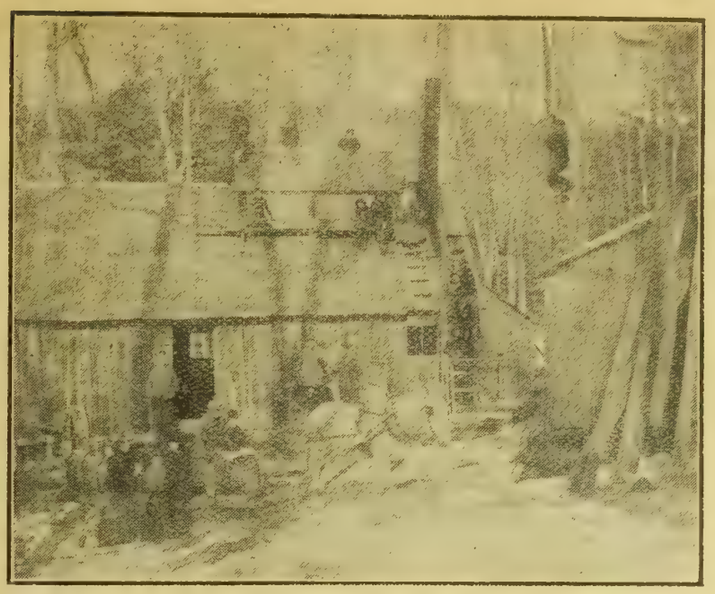
In order that a first-class article will be assured, the first matter of importance would be the outfit and this is one of the all important factors in the making of maple syrup. As soon as the sap has accumulated in the cans on the trees, prompt action must be taken to get it boiled down The longer the sap remains unboiled, the darker will be the syrup, therefore, it is necessary to have an evaporator in order to get it done quickly. Although we have had no experience with any of the later types of machines but that of the Grimm Mfg. Co., we consider such would be unnecessary, as their evaporator is perfectly satisfactory in every respect.

It might be well to mention here that all vessels, cans, strainers, thermometers and such like utensils, that come in contact, in any way, from the time the hole is bored in the tree until the finished product is placed on the market, must be, in every way, void of smell, taste or coloring, as the least of any of these will affect the sap or syrup and spoil it as a first class article. Utensils of tin, are far superior to those of any other material and it is thus in the tin boiler of the evaporator that we score another point over the old fashion iron pot, or galvanized iron pans.

As to the cost of an up-to-date outfit it is estimated that a, 1000 cans equipment would be about $500., but as to this, I might say, that on a farm he would likely have team and sleds at hand and a gathering tank can be substituted with a cask if thoroughly soaked and cleaned, while part of the cans might be purchased each year when he could see fit to do so. Covers could be discarded altogether for a few years by taking care to gather the sap when a storm threatened and then empty the cans immmediately after the storm ceased. Though covers are beneficial as they keep the leaves and moss and drippings of the trees from the sap.

The cans should hold not less than eight quarts and be smaller at the bottom than at the top, so as when it freezes the ice will raise in the can and not burst the sides. When gathering, do not throw the ice away as this only decreases the quantity of syrup for the season. If placed in the storage tank by the evaporator it will thaw of its own accord.

Let us now turn our attention to the tapping, this should be done about the last week in March. If the tree is tapped too early in the season it retards the flow of sap. the hole should be 7-16 to 1-2 inch in size and 1 1-4 inch to 1 3-4 inches in depth, according to the size of the tree. The auger must make a clean cut slanting up giving a chance to drain out. Clean out the cuttngs and insert the spout.



Waiting For a Candy Treat
Scene at True Hodgson's Sugar Camp, Collingwood Corner, N. S.

The spout should be of the latest type and rest on the bark of the tree and not driven into the wood.

The tree should be tapped on the southern side ranging from south east to sout west and change sides alternately, taking care not to tap directly above or below the old cut.

As to the size of the tree the smallest should be eight or nine inches through, while a tree eighteen inches or more through, could be tapped two or three places at once according to the size of the top of the tree.

When a tree of another specie grows close to a maple tree, cut it down as the roots of both will stretch out parallel and the small roots or feeders coming in contact with each other retards the supply of nourishment for the maple tree. Also cut small soft wood trees to allow the sun to shine directly, if possible on the tree where it is tapped.

When the syrup is ready for shipment, it should be placed in attractive packages and labeled bearing the makers name and post office address. Clear glass bottles are preferable for the retail trade, while one or two gallon cans may be used for larger quantities.

Maple syrup making is like butter making, it has advanced of late. Where our fathers used the old milk pans we now have the latest cream separators, so also the old iron pot with its thick black contents, (though it was sweet), has given way to the evaporator, with the sap running in at one end and the clear, pure syrup running out at the other.

EDGAR SHAMPER.
Kingston, N. B.

THE OLD WAY AND THE NEW WAY.

I have been making maple sugar for fifty seven seasons. When I first commenced operations we used to go in the woods in summer, peal birch bark and make it into receptacles in which to catch the sap. We made our own spouts and tapped the tree with an axe and gouge chisel. Large pots of a capacity of from 15 to 30 gallons each were used to boil the sap. These pots were hung on cranes outside and had a large log of wood called the back log to one side of the fire and a smaller log, the front log on the opposite side of the fire. I have often worked in the open air all night watching the boiling pots. To keep fire going under four or five pots was no small job. The first improvement was to build a stone furnace on which the pots could rest and the trouble of keeping the fires was diminished very materially and consequently it was a great improvement over the back log system and we did not burn so much wood. We also bought sap cans to hang on the trees and again our work was lessened and then we had no more trouble with making birch bark receptacles.

Finally we bought an evaporator which is a great improvement over the pot system for boiling sap. We believe the acme of perfection has been reached in those evaporators. It is a pleasing sight to see the sap enter the evaporator at one end and after passing through several compartments come out at the other end as golden syrup.

DAVID STILES,
Lutz Mountain, N.B.

FACTS AND FIGURES RE SUGAR MAKING.

Although I have not as large a maple sugar business as some of my neighbors I have been in the business a considerable length of time, beginning with the laborous birch bark system for catching the sap, and pots on an open fire for boiling.

The barks were placed on the snow and as it melted, they, on reaching the ground, were some considerable distance from the tap and sap spout, which gave the wind a chance to blow the drop on the wrong side of the bark.

After many years we procured a pan set on an arch or furnace for boiling the sap which we caught in tin kettles hung to the sap spouts which were of metal instead of wood. Finally I procured a Champion evaporator from the Grim Mfg. Co., 58 Wellington Street, Montreal, P. Q., size 3 ft by 10 ft for $100. The workmanship is good and satisfaction guaranteed.

My sap kettles cost from $10 to $12 per hundred with sap spouts. This price does not include the covers for which we purchased the tin and made them ourselves at leisure.

Instructing in Candy Bark Making

I have between 500 and 600 kettles which I hang on trees from 2 feet to 8 feet in circumference. I gather with tin buckets and carry it to the camp on a sled drawn by a horse. My hauling tubs have faucets in them to empty them.

We build our camps on a slope so that gravitation will carry the sap into the tank without lifting the hauling tub from the sled. As the sap leaves my hauling tub I strain it through flannel, and again I strain it as it flows into the tank that feeds the evaporator which is below the main tank. I strain the hot syrup through flannel to remove the sediment called nitre, or sugar sand, which is a combination of malic acid and lime which I believe is always present in sap.

For the next season I have procured felt strainers from the Grim Mfg. Co to strain the syrup and will strain the sap through cheese cloth. When we strain through flannel we find it necessary to use a settling tank.

I use a pot for making sugar. For an arch I used sheet iron in shape like a section of pipe set on end on a brick and mortar base, just large enough to receive the bottom of the pot, with a door in one side and a pipe in the other leading to the smokestack of the evaporator arch, which being tall gives it a good draught.

The size of my camp is 16 ft. by 20 ft. with a woodshed on the end of it about 10 ft. by 20 ft. with a trolly to carry the wood into the main building.

The average annual yield of sugar is about 1 lb. per kettle. On Some large trees we hang two buckets.

The sugar is worth 12 cents a pound. We purchase syrup cans for 12 cents and sell the syrup in cans for $1.25 per gallon. One gallon will make 9 pounds of sugar. We test the density of syrup and sugar with the thermometer which makes it of an equal quality or consistency.

Now this yield is over and above much that is consumed by the operators and visitors, as you who have sampled any of these delicacies know that they are a luxury in the sugar camp as well as elsewhere.

The prices that I have quoted are local and are advancing.

D. W. DIMOCK.
Farmington Cum. Co., N.S.

MAPLE SUGAR MAKING IN NOVA SCOTIA.

When the weather begins to warm up and there is a suggestion of spring in the air, with sunny days and frosty nights, then it is time to tap the maple trees and get ready for the sugar season. In order to make a good article of maple sugar and syrup it is necessary to have a first class equipment. Everything with which the sap comes in contact should be tin or metal. The trees are tapped by boring through the sap wood of the maple tree and inserting a spout from which the sap will flow drop by drop quickly or slowly according to the climatic conditions The sap buckets are of tin, fastened to a hook on the spout. Each bucket is provided with a cover as a shelter from storm, dirt and leaves. The sap is carried from the trees to the gathering tank in large tin pails. It is then taken to the sugar house and strained into the sap holder. A pipe or feeder conducts it to the evaporator which is a Champion manufactured by Grimm Co., Montreal, size 4 by 16, feet large enough for a bush of 1500 trees. The sap passes through the pans, over the arch where the fire is. coming out at the back in syrup where it is tested with a thermometer to get proper thickness. It is then put into setting cans and afterwards drawn off into gallon cans ready for market. If sugar is to be made, the syrup is put into the "sugaring off" pan and boiled until it reaches a state hard enough to cake into sugar. It is then put into tin boxes the required size and left to harden.

To have amber colored, transparent, syrup, the sap must be boiled immediately after it is gathered. The longer

(Continued on page 288.)

HORTICULTURE

New Brunswick Fruit Grower's in Annual Session.

The fifth annual meeting of the New Brunswick Fruit Grower's Association was held in Church Hall, Fredericton, on Thursday, February 25th. A representative number of interested fruit growers were present. A very good show of winter apples was also tabled and judged by Messrs W. Saxby Blair, of St. Anne de Bellevue, and A. G. Turney, the Provincial Horticulturist. President Isaac Stephenson occupied the chair and after calling the meeting to order read the following address:

PRESIDENT'S ADDRESS.

"Gentlemen:—

I am glad to welcome you here to the 5th annual meeting of this asssociation after a year marked by some progress in our business of fruit growing. Orchards for the most part came through the winter of 1909-1910 in very fair shape. However, there has been quite a large amount of injury in some sections, due to girdling of trees by mice. Crops were hardly up to the average. Insect pests seem to be steadily increasing in numbers, and I would strongly urge upon our fruit growers the necessity of going more deeply into the spraying of their orchards.

"New Brunswick apples show that they can compete with these of other countries, and have won honors for their growers, as well as advertising the province.

"Both at London, England, and at Amherst, N. S., our exhibits have in strong competition won high honors. We are to be represented at the Brussels Exhibition during the present year with a collection of 1909 fruit, The result of these exhibitions should give our people hope and encourage them to develop the business for which so many sections are so well adapted.

"Another step in advance since our last meeting is the appointment of a Provincial Horticulturist, Mr. A. G. Turney, who is present with us to day, and will address the meeting this afternoon. The duties of this gentleman are to co-operate with our fruit growers in the development of the New Brunswick Fruit Industry. His work this summer will in all probability largely consist of visiting the various sections of the province, and the illustration orchards, and holding meetings at which appropriate methods of orchard practice will be demonstrated, and all matters pertaining to fruit growing discussed.

"I am of the opinion that the adoption by the Association of a uniform score cards for the judging of the different kinds of fruits and the circulation of such cards among the fruit growers, would possibly enable them to select their fruit for show purposes with better chances for success.

"It has been customary to hold the annual meeting of this association and the show in connection with it some time in February at Fredericton. For many reasons it is advisable to hold this meeting earlier in the year, preferably in November. If this association is to continue as the New Brunswick Fruit Growers Association, it's annual meeting ought to be held in a more central place, and at a more favorable season; so that it may be accessible to all, instead of to one fruit section. If we are going to extend our membership and make the association exert an influence for good throughout the country some such step is very necessary. We have done good work in the past, but the time has come for us to take a step upward. By holding our show at St. John in the early part of November, we ought to be able to get a larger attendance and display of fruit on account of the ease with which everybody could get there, and because it is a far better time of the year to exhibit fruits. The one day's programme which we now have might well be extended then to one of three days duration, with the most expert men we can get as lecturers. I invite discussions on this point, and merely throw this out as a suggestion.

We have been very fortunate in securing the assistance of Professor Blair at this meeting. His name is too well known to need introduction.

"In conclusion I would urge you all to redouble the interest and enthusiasm which you have manifested in the work of the past, and to enlarge the membership of this association with a view to placing it upon a firm and more satisfactory basis."

After a brief discussion on the Presidents address, the various points of which were heartily concurred with by the members. Mr. S. B. Hatheway, the Secretary read this report and gave an interesting account of the various orchard and other meeeings held during the year.

Treasurer, Henry Wilmot's report showed a healthy financial condition.

In the absence of Mr. Vroom, Chief fruit inspector for Nova Scotia, who was to demonstrate the box packing of apples, Prof. W. Saxby Blair took his place and gave a very interesting, practical demonstrative lecture.

OFFICERS FOR ENSUING YEAR.

President, C. N. Vroom, St. Stephen. Vice-President, W. B. Gilman, Fredericton. Treasurer, Henry Wilmot, Ormocto. Secretary, A. G. Turney, Fredericton.

THE CARE OF THE ORCHARD

was the subject of a very interesting talk by Mr. W. Saxby Blair. He advised the New Brunswick fruit growers to stick close to the McIntosh Red. The quality of the fruit on the tables was a demonstration of what might be accomplished by keeping apples under proper storage conditions. Drainage, fertilization and freedom from weeds were some of the essentials for successful orcharding. In regard to growing an average crop of well grown and well colored fruit the speaker said: "If you want to develop first class fruit you must, besides attending to the other details of orcharding, do some thinning of the fruit after it has set."

The mulching system gave trees a shallow root system. Cultivation gives a deeper root system and consequently a larger feeding area. In regard to a question, re protection of trees from mice he said, paper, veneering, wire netting, or cinders might be used or one might tramp the snow around the base of the tree.

In setting out a young orchard Mr. Blair would recommend the use of fillers between the permanent trees as a means of lowering expenses until the permanent trees came into bearing.

KEEPING BLACK KNOT IN CHECK.

Prof. Andrews, of Sackville, gave his experience in combating black knot on plum trees. He had found that when his plum trees were sprayed with blue vitrol water and afterwards with a soft soap emulsion that black spot was kept in check. He has been using this remedy for 6 years with very gratifying success.

Mr. H. H. Smith of Hoyt Station, handled the subject of Strawberry Growing in a very instructive manner. He pointed out the profits from systematic strawberry culture and outlined his own methods of cultivation. Mr. O.W. Wetmore, of Clifton, another successful strawberry grower, related his methods and enumerated the varieties with which he has been most successful.

The committee appointed to report on the President's Address brought in the foltowing resolutions:

THE PROVINCIAL HORTICULTURIST.

The president then called on Mr. A. G. Turner, the newly appointed provincial horticulturist, to address them, and in complying Mr. Turney said that owing to the short time he had had been in the province he would not be able to do more than outline the plan which he proposed to follow in the endeavor to make it a great fruit growing centre.

At the present time $25,000 was sent

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is equivalent to **Government Standard No. 1,** and fully complies with all the requirements of the Seed Control Act.

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which is equiqalent to Government Standard No. 2, is also of a high degree of excellence.

These Two Brands

are the best for the dealer to sell, because they will ensure satisfied customers, therefore increased trade.

They are the Best

for the farmer to show, because of their purity, freedom from harmful weeds and general high quality.

Lowest prices quoted on application.

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Write at once. Do it right now. May mean dollars in harvest.

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Booklet on patents and drawing sheet on request.

out of the province to Ontario for Apples. This in the face of the natural advantages which the province possessed for fruit growing, was a condition of affairs that is humiliating. But he saw hopes that by reason of the enthusiasm which seemed to be evidenced by these present, a change in the present condition would soon take place.

It had now become well demonstrated that varieties of apples could profitably be grown in the province, and there was no reason why the cultivation of the varieties could not be considerably increased. Fruit growers of New Brunswick had no reason to envy the fruit growing capacity of any other province. In this province they had the soil and the climate and all that was wanted was the man. As soon as the man could be found the result would follow that New Brunswick would quickly take that place among the fruit growing localities in the Dominion, that her good qualities entiled her to.

NEXT MEETING IN ST. JOHN.

During the afternoon a discussion took place on the point suggested in the president's address as to the time and place of the next annual meeting and it was ultimately decided to hold the next meeting at St. John in November next, the reason given for the change in time and locality being that the month of February when the meeting was usnally held, was too late in the season to secure a fair exhibit of these early varieties of apples which could be better obtained in November.

Fredericton it was thought, was too far away from the fruit growing districts of Kings Co., for the people of that locality to take part in the meetings of the association. By continueing to hold the annual meetings in Fredericton the membership of the society was practically restricted to local men, and if it was to be an association of New Brunswick fruit growers, it would become more available to the other parts of the province.

The President's address was referred to a committee who brought in the following repurt:

"Your committee to whom was referred the President's address touch only some of the more important points of the same in their report.

We beg to emphasize the recommendations he makes for the more general and thorough spraying of orchards for the suppression of insect pests. This practice if followed by orchardists will not only result in the lessening of insect injuries, but will abundantly pay for the expense and labor ineurred by a large yield of better fruit.

The appointment of a Provincial Horticulturial referred to by the Presidents is certainly a great step in advance, which should be highly appreciated by this Association and should work much good to the fruit growing interests of the province. We are glad to learn that Mr. Turney has already made arrangements for the beginning of demonstration orchard work, and we look for increased interest and better methods in fruit culture as a result of his labors.

Your committee would recommend that the Association adopt the form of score card forwarded to the President by the Nova Scotia Fruit Grower's Association as it is most desibable that a uniform system of judging should be in vogue among all fruit growers.

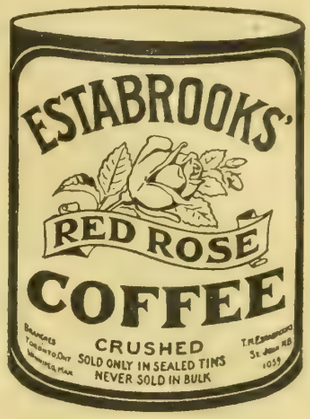
Perhaps the most important point in the address of the President so far as the work of the Association is concerned is his reference to a change in time and place of the annual meeting of the Association. Your committee feels that this might well result in better exhibits of fruit and a larger membership and attendance at the meetings. We therefore recommend that the next annual meeting of the Association be held in the city of St. John, on November next, before the close of navigation on the St. John River.

Respectfully submitted,
WM. B. GILMAN,
C. N. VROOM,
WM. MCINTOSH.

(Continued on page 286.)

Crushed Coffee— what is it?

By a new process of crushing between steel rollers, instead of grinding, the skin, which remains in the eye of the bean after roasting, is separated from the kernel and removed by air suction, while the kernel is broken into small even grains. These grains when steeped, being free of the skin or chaff, settle quickly, leaving the liquid clear and bright, and give the true coffee flavor.



Estabrooks' Red Rose *crushed* Coffee is as easy to make as Red Rose Tea. Directions are in each tin.

It is strictly pure, not a particle of chicory or any other adulterant being used, and is packed in air-tight tins the same day it is roasted so to retain its full flavor, fragrance and strength.

A good combination is Estabrooks' Coffee for breakfast and Red Rose Tea for other meals.

Estabrooks' RED ROSE Coffee

ORDER A TIN IN TIME FOR BREAKFAST

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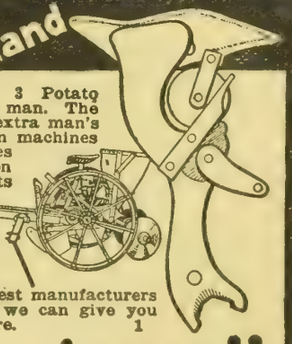

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4,000 Rods **4-bar 40 inch No. 9 Fence,** stays 22 inches apart. In lots to suit, in 40 rod rolls. **Price 23c per rod.** Freight paid east of Fort William. This fence was made up for a foreign customer, who failed just before shipment was made.

Also some bargains in small lots of 7-Bar, 8-Bar and 10-Bar Fences. Particulars on request.

The EMPIRE FENCE EXORT CO., LTD., Walkerville, Ont.
Good Dealers desired in unoccupied Canadian Territory.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Developing Dairy Heifers.

When the heifers have reached an age when they will thrive without milk, they should have the best hay that the farm affords and some form of succulent food, such as ensilage or roots. My experience in feeding young heifers has convinced me that oats are the best grain food to use as a part rationins feeding young heifers from the time they are taken from the skim-milk ration until they are to be bred. We have no grain food superior to ground oats for developing the organs of maternity of young breeding animals or to promote their breeding qualities.

Every dairy-bred heifer has an inherited tendency of function that enables her to reach a certain development or dairy capacity. If she is placed under unfavorable conditions, or environment, this development is arrested in whole or in part and the young animal's capacity, for future development, is weakened, according to the degree to which development was retarded. The younger this development was retarded, the more severe the future results will be.

A ride through almost any dairying section and a look at the calves and young dairy heifers and their developments, their humped-up, half starved, scrawny appearance, proves, rather conclusively, the chief reason why so many cows, in our dairy herds, are incapable of paying for their feed and care. Personally, I believe that the growing and developing of young dairy heifers has much to do with the amount of grain foods that they will require to return a profit after they are put to use in the dairy.

The heifer that is raised upon good, nutritious farm roughage and given plenty of fresh air and exercise and fed a small amount of good, wholesome grain foods, will have her digestive system so well developed that she will be able to make better and more economical use of our home grown dairy foods than the heifer that has been fed and developed largely upon highly concentrated protein foods.

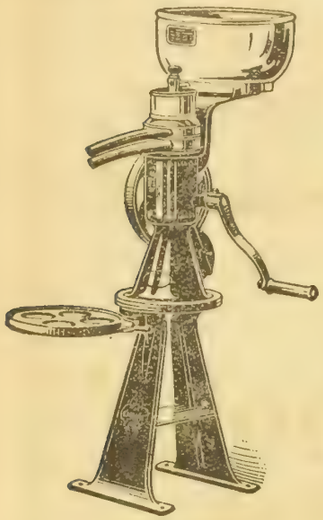
Another matter is that of breeding the heifers at too young an age or before they have attained a fair development. We make a great mistake when we try to rush nature, and much of this talk about early maturity is wrong. The man, who gives his heifers time to build up a good, strong individuality, is on safer ground than the man, who will not wait for this maturity. We must breed early to get the best results, but not until the heifer has reached a fair size and is in good flesh condition. From 24 to 30 months of age is an ideal time for the heifer to drop her first calf, when she has been rightly fed and cared for.

From the time they are bred, until the time they drop their first calf, is another critical time in their lives and, in most instances, they will do better if they are kept away from the other cattle. It is better to keep them thus by themselves, on account of the danger from abortion, either through neglect, injury from the larger cattle, or from contagion, as there are few herds of dairy cattle that are entirely free from this complaint, which is one of the most serious that dairymen have to contend with at the present time.

Many dairymen differ in their opinion regarding the size of the bull that the young heifers should be mated with. Personally, I like to use a small animal, owing to the difficulty that many heifers have during parturition when bred to a large bull.—W. MILTON KELLEY, in Successful Farming.

Economy of the Round Dairy Barn.

The planning, construction and arrangement of farm buildings do not usually receive the thought and study these subjects warrant. How many dairy-



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is a most interesting and instructive book for dairymen. It tells the truth about the two standard methods of cream separation. It is the most unbiased book on separators ever published. It gives many pointers worth dollars to you. You can procure one copy of this book if you will fill in, cut out and mail the coupon to us promptly. Extra copies are 25c. Don't miss this new book. Send the coupon immediately. Send it by next mail.

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Important Facts You Should Know about Cream Separators

There are six important things a cream separator should do in order to be a paying investment.

First: It should get all the cream.
Second: It should get the cream in perfect condition.
Third: It should save you money.
Fourth: It should save you work.
Fifth: It should be durable.
Sixth: It should make money for you.

Unless a cream separator does every one of these six things it is not a really good cream separator. It is a losing, instead of a paying, investment. It is not the machine for you.

There are a host of machines that are claimed to do these six things. But Empire separators are the only ones that are actually doing the whole six. That's certainly a bold statement. It's the truth, nevertheless.

For example, we will show you how the Frictionless Empire meets these six requirements.

First: The Frictionless Empire skims to .02 of one per cent. and often less. That means the loss of only one pound of butter fat in every five thousand pounds of milk, which is equal to the loss of one pound of butter in all the milk a cow gives in one year. The Frictionless Empire **gets all the cream.**

Second: The few smooth skimming parts of the Frictionless Empire are as easily and thoroughly washed as a glass tumbler. This cannot truthfully be said of skimming devices with corners, slots and crevices that soon get clogged up and cannot be thoroughly cleaned. Cream in perfect condition—cream without a taint—can only be obtained from a separator that **can be thoroughly cleaned.**

Third: The Frictionless Empire gets thirty per cent. more cream than old style methods. **The more cream saved the more money saved.**

Fourth: The Frictionless Empire does the skimming in a small fraction of the time required with old style methods. **It saves many hours of work.** It almost runs itself. So nearly frictionless that it will run for half an hour after you've completed the skimming unless you use our brake to stop it.

Fifth: The very best materials that money can buy are used in the Frictionless Empire. The working parts are perfectly turned—true as a die. They fit together accurately, thus reducing friction and wear close to the vanishing point. You can judge the durability of Empire Separators when we tell you that the average cost per machine has been but thirty cents per year for repairs during ten to fifteen years of service—**years of service prove their worth.**

Sixth: The Frictionless Empire **gets thirty per cent. more cream** than old methods. The cream is first quality—commands a higher price than gravity cream. More cream and higher price cream necessarily mean more money.

No other separators will fulfill all these six requirements. They cannot do so, because they cannot use the Empire patented devices and mechanism.

These patented features are found only in the Frictionless Empire (cone method) and Empire Disc. They are **both high-grade machines.** And in these machines you have your choice of the only **actually standard** methods of cream separation.

Whichever machine you choose you are bound to be satisfied, for every Empire Separator is sold under a binding guarantee—**a guarantee as good as a gold bond.**

Some day you'll Own an Empire

No matter what machine you buy now sooner or later you'll buy an Empire Separator. An Empire is the only separator really good enough for you. An Empire will make more dollars for you, cost less to run, save you more time, than any other make you can purchase. There is nothing in cream separators equal to an Empire, remember that. 1

The EMPIRE Line of Cream Separators

All Sizes of Both Cone and Disc Machines

We give you your choice of either the cone or the disc method. Both are good methods. The most important thing is the choice of the make. So be sure your new separator is Empire-make.

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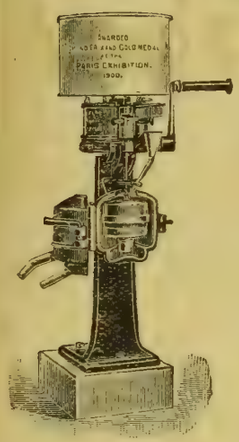

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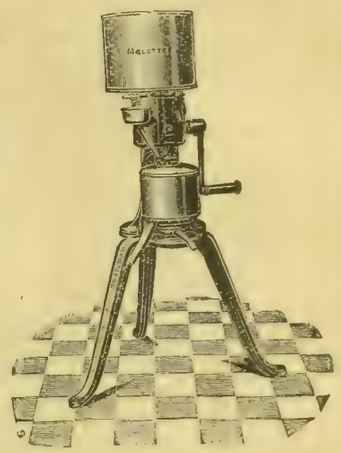

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men have compared a circular 40-cow barn with the common rectangular building containing the same area? How many understand that the circular structure is much the stronger; that the rectangular form requires 22 per cent. more wall and foundation to enclose the same space; and that the cost of material is from 34 to 58 per cent. more for the rectangular building?

To the writer's knowledge, heretofore there has never been published a carefully figured out, detailed comparison of a properly constructed circular barn with the rectangular barn. This information is given in Bulletin No. 143 of the Illinois Experiment Station, Urbana, which has just gone to press, copies of which may be obtained upon request. This bulletin is freely illustrated, and offers practical help to dairymen in the matter of barn construction. The objections that have been raised to round barns have usually been made by people who have not gotten far enough into the subject to really understand the relative merits of the two forms.

It has been found by comparison and experience that the round barn has many advantages over the rectangular form. In order to compare the amount and cost of material in the round and rectangular barns, the figures given are based on the careful, detailed estimates of an expert barn builder. Two comparisons, figured on wood construction throughout, are made, in which round barns 60 feet and 90 feet in diameter are compared with both plank and mortise frame rectangular barns containing the same number of square feet of floor space, respectively.

SUMMARY OF THE BULLETIN.

1. Round barns would be more generally built if their advantages were known and if the few which have been erected had been rightly constructed.

2. The round dairy barn offers greater convenience in storing, handling and distributing the feed.

3. In the circular construction, much greater strength is secured with less lumber.

4. Detailed account, with cuts showing how the round barn at the University was built.

5. Itemized statement of cost of a 60-foot round barn.

6. Brief description with cuts and plans of several round dairy barns in actual use.

In summing up the data given in this bulletin, it is obvious that the advantages of the round barn are convenience, strength and cheapness.

The round barn is more convenient because of the greater ease and fewer steps with which the feed can be gotten to the cows, owing to the central location of the supply, and because of the unobstructed mow, which reduces the labor required in mowing hay.

The circular construction is the strongest because advantage is taken of the lineal strength of the lumber. All exposed surfaces are circular, and withstand greater wind pressure because the wind can get no direct hold, as on the sides or gable ends of a rectangular barn.

In round numbers, rectangular barns require, according to their construction, from 34 to 58 per cent. more in cost of material than round barns of the same material.

Prof. W. J. FRASER.

Good Records From Brooklands' Holsteins.

EDITOR MARITIME FARMER :

I am sending the milk records of five of Mr. Giles' Holstein cows from the date of dropping their last calves, ranging from a little over nine months down to three months, with the average per cent. of butter fat for the time of milking. Every ounce of the milk has been weighed from each cow, night and morning, and a sample taken from each cow's milk every day and tested every month. The highest test in that time has been 6.4 and the lowest 2.6. You will see by the records below that they have made a good average, although they are Holstein, that are said, by some people, to give blue milk. Eke DeKol Paul's Queenie is a three-year-old heifer, with first calf. She has only been milking three months, during which time she has averaged over 1,000 lbs. of milk a month. Now, these five cows are all home bred. They were bred and reared at Brooklands. Lady Rose Akkrum's calf is a fine bull, sired by Ormsby Beeman, a young bull, imported from Mr. W. A. Mattison, Utica, N. Y., and sired by Paul Ormsby. His dam, Beeman Vale, has a butter record of over 23 pounds butter in seven days, as a three-year-old. That should make the breeding of Rose Akkrum's calf all right, as you see she is a very high tester, with an average of 4.68 for the five months in milk.—HARRY ALLISTON, Herdsman for C. H. Giles, Fredericton, N. B.

Name of Cow.	Date of last calf, 1909.	Months in milk.	Days in milk.	Pounds of milk.	Average p. c. fat.
Maid of Brooklands.	May 2nd.	9		9451	3.95
Lady Pietertje Rose DeKol.....	April 20th	9	11	8740	4.52
Lady Rosie Akkrum	Sept. 14th	5		5284	4.68
DeKol's Albino.....	Sept. 20th	4	11	4591	4.44
Eke De Kol Paul's Queenie.....	Nov. 14th	3		3162	3.7

8,000 Pound Scrub Cows.

EDITOR MARITIME FARMER :

In reading Mr. S. B. Hatheway's article, in the FARMER of Feb 8th, on "Weighing and Testing Milk," I thought it was very good until I came to where he said he had some 8,000 lb. good cows that never heard of a pure bred bull. Now, what I want to know is how Mr. Hatheway knows he has some 8,000 lb. cows that never heard of a pure bred bull? I suppose those cows would be called scrubs. What I am trying to come at is this : Mr. Hatheway has been weighing his milk only a short time; then how does he know about his 8,000 lb. cows ? I don't think you can go through York County and buy many 8,000 lb. scrub cows. If you can, what need is there for pure breds? For I can tell you if a man can get a herd of pure bred dairy cows to average 8,000 lbs. of milk a year, he has good cows. I have been weighing and testing milk in the herd of Holsteins, owned by Mr. C. H. Giles, for six years and I can tell you the only way to tell how much milk a cow gives in a year, or between calves, is to weigh every pound at every milking; not weigh one or two months and guess at the rest, for what a cow gives, she gives, and what she don't give, she don't give. I am not going to say that Mr. Hatheway has not got any 8,000 lb. cows that never heard of a pure bred bull, or I am not going to say that he has, for I don't know and he don't know himself, because he has not weighed their milk a year and he can't tell what his cows will give until he has done so. I don't think that the public should be led to believe that we have 8,000 lb. scrub cows in York County, when we don't know it for a fact One more thing I would like to say about weighing milk : In my six years of experience, I would say, I have often looked ahead too much and thought the milk record would be a great deal larger at the end of the year than it really was, as some times the cows will start with a very high record and that is why I say you cannot guess at an average after weighing for only two or three months.—HARRY ALLISTON, York County, N. B.

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LIVE STOCK.

Diseases of Sheep.

Sheep in Canada are particularly free from disease. The climate of this north land has proven to be particularly healthful for sheep Alike in the clear, cold climate of the west and the snowy winters of the east, sheep do well, their warm coats protecting them sufficiently, while the pure air and sunshine keep the lungs and consequently their whole system in good order, so that good health is practically assured, if the management is even half what it ought to be.

The diseases of sheep may be divided into several classes. First those caused by external parasites such as scab and foot rot; along with these may be mentioned ticks and lice, which when neglected, frequently bring about unthrifty condition bordering closely on disease. Then there are internal parasites such as worms of various forms, which may infest the stomach, the intestines and the respiratory organs or the head.

Digestive derangements, too, manifest themselves at times. To these may be added the diseases and accidents peculiar to reproduction.

Scab.—Sheep scab, when once introduced into a flock, must be dealt with by thorough mearures. It is a strictly contagious disease caused by a minute specific mite technically known as Psoroptes Communis Ovis. It is so small as to be difficult to discern with the naked eye. This disease generally affects the parts which are covered with wool. It usually begins at the upper part of the body, thence spreading over the neck, shoulders and hips, extends slowly but surely in ever-increasing areas. In two or three months the entire body may be affected. The disease spreads, as a rule, much more rapidly during the winter than in the warm weather. In sheep on grass, after shearing and washing it may remain for a long time in an almost latent condition. Sheep well fed and otherwise strong and healthy resists its ravages in a remarkable way, while those which are thin or badly notrished, rapidly become debilitated, and if left untreated, live but a short time. Affected sheep experience great itchiness with irritation, formation of pauples, inflammation, and the development of crusts or scabs under or near the edge of which the parasite lives. The sheep are restless, they scratch and bite themselves, rub against fences, posts etc., as if in great torture. The fleece assumes a tufted, ragged and matted condition. Tufts of wool are pulled out by the sheep with the teeth, or are left on fences, poost, etc., where they have rubbed; to each tuft scabs are attached, which are usually replaced at the seat of origin, by thicker or more adherent crusts. The skin becomes more or less bare and furrowed, and from the furrows blood oozes. Without treatment the disease goes from bad to worse, spreading the infection, which is readily taken up by other sheep which may come into contact with a diseased one or with infected objects.

Under the provision of the Animal Contagious Disease Act it is the duty of every owner, on perceiving the appearance of sheep scab in his flock, to give immediate notice to the Minister of Agriculture at Ottawa, and to the nearest veterinary inspector of the Department of Agriculture, of the suspicion or presence of the disease. Instructions will then be issued and carried out according to government regulations.

Two principal preparations are recommended for the treatment of scabby sheep, the lime-and-sulphur dip and the tobacco-and-sulphur dip. The former is recommended and used by the Department of Agriculture. Its preparation is as follows: Take 10 pounds fresh lime and add enough water to make a paste. Sift into the lime paste 24 pounds of flowers of sulphur and stir thoroughly. Boil this mixture in 30 gallons of weter for three hours, frequently stirring the mixture. The solution should then be a brown or chocolate color. Allow the mixture to stand for a few hours, preferably over night, and then draw off the liquid. Care should be taken not to disturb the sediment, which is slightly injurious to the fleece of the sheep. To this liquid add sufficient water to make 100 gallons. It should be used for dipping at a temperature not lower than 106 degrees, and not higher than 112 degrees Fahrenheit. The hot dip softens the scabs and destroys the mites. The sheep should remain a full two minutes in the tank. The head should be plunged, and if there are thick crusts on the skin the dip should be rubbed into the wool with a stiff brush or otherwise. Two dippings are necessary at intervals of from 10 to 12 days. In very bad cases a third dipping may be necessary. The sheep should be clipped whenever possible before dipping. When the flock has been dipped once, their quarters should be changed; the barns, fences, etc., where thye have been kept should be well covered with a lime wash containing at last 5 per cent of the pure carbolic acid or creolin.

Foot Rot.—Foot rot is of two kinds, viz., contageous and non-contageous. The latter is a simple disease usually due to excessive wear of the hoof and the irritation caused by the introduction of dirt to the sensitive tissues of the foot. It is, therefore, most prevalent on low, wet land and in filthy yards and barns.

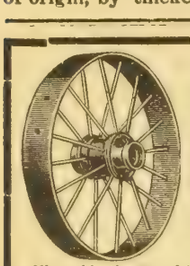
Prevention is better than cure. Sheep should not be fed in wet, muddy or filthy places. Their hoofs should be examined and pared when necessary to remove superfluous horn. When the disease appears in a small flock the hoof should be trimmed down closely and the feet washed or soaked in a solution of copper sulphate, 1 ounce to 2 1-2 pints of water, then dress with watery solution or chloride of iron or with a mixture of equal parts of chloride of antimony and tincture of myrrh. After such dressing the raw surfaces should be protected by a coating of pine tar or gutta percha varnish. Then remove the animals to a dry, clean pasture. If the disease is not of long standing this treatment will generally effect a cure, although in confirmed cases where much destruction of tissue has taken place it may be necessary to repeat the dressing several times.

For large flocks on the range or elsewhere a more general treatment is necessary. A suitable solution is made in the preparation of ten pounds of copper sulphate, dissolved in five gallons of water. The solution is put in troughs two or three inches deep. The sheep after being driven through water, preferably running water, to cleanse their feet, are, by using a narrow chute, made to pass one by one through the preparation. An alternative to the above, affected sheep may be held for a short time on a floor sprinkled to a depth of three inches with freshly slaked lime.

Canadian sheep men may be thankful that the contageous form of foot-rot is almost unknown in this country. The few cases seen are as a rule in recent importations. For this reason imported sheep and others that have travelled in dirty cars should be carefully examined on arrival and treated at the same time as they are dipped. Prevention of the trouble is much cheaper than effecting a cure. The treatmet is similar to that described above although owing to the persistant nature of the disease recovery is generally much more protected. As in this form the trouble begins in the skin of the interdigital space and works downwards through the sensitive laminae, it is advisable to dress the skink between the dew-claws with a mixture of one part carbolic acid to ten parts glycerene, or with vaseline twenty parts to one part of iodine.

Ticks and lice.—In examining sheep for skin diseases it is well to remember that they are subject to infestion with lice and ticks. Of these the louse is most to be dreaded, both on account of the rapidity with which it multiplies and the serious effect which it is liable to produce on the health, as well as the wool, of its unwilling host. The tick, which by the way is not a true tick, but really belongs to the louse family, while much less prolific, develops rapidly and is most frequently troublesome in lambs, although like the white louse it is found on sheep of all ages. As in other species of domestic animals, these parasites are most frequently found and appear to flourish best on the thin and badly nourished sheep rather than on those in good condition. When present in any number both ticks and lice induce great irritation, causing the sheep to scratch with the hond feet, gnaw the sides and rump and rub on any convenient object in a manner very similar to those affected with scab. In this way the fleece is often seriously depreciated, while from its mode of feeding, the louse also cuts the fibre near the root, thus greatly lessening the growth and value of the wool. The effects on the skin of the attacks of these animals, may very easily be mistaken for scab unless a careful examination is made. It cannot, however, be too often repeated that there is no excuse for error in a diagnosis of this kind, for although scab, lise and ticks may undoubtedly exist on the same animal, a sufficiently close and painstaking investigation, with the aid of a moderately powerful pocket magnifying glass, will enable any intelligent observer to reach a definite conclusion as to the nature of the trouble, whether it be simple or compound. It must be borne in mind that the presence of lice is no proof that a sheep is free from scab. While the converse is also true, it is not so important, as while lice and ticks are disagreeable and unwelcome guests their presence is a matter of slight consequence, especially to the sheep owning public, as compared with that of the of the smaller but more deadly and persistent scab mite.

J. G. RUTHFORD,
Veterinary Director General.



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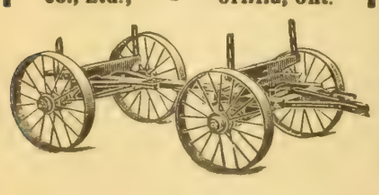

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The Purebred Sire.

By judiciously using a purebred sire common animals can be greatly improved in a few generations to resemble closely the purebred. This is by reason that the purebred sire is capable of transmitting qualities, such as he possesses himself, in a much greater degree than the animal with which he is mated. This arises from his prepotency produced by intensive breeding. He is prepotent for the reason that he is purebreed, and the dam is not prepotent because she is of mixed breeding, having no one quality strongly and firmly fixed. Let the difference in blood properties between the sire and the dam be represented by 100. The progeny will not possess 50 per cent. of the blood properties of the sire and 50 per cent. of the blood properties of the dam, but it will possess as many more than 50 per cent. of the blood properties of the sire as his power to effect change exceeds the power of the dam to resist change. In this he found the explanation why the progeny so much more nearly resemble the sire than the dam, when the sire is purebred and the dam is of heterogeneous breeding.

Continue to choose good sires from the same breed, and in a few generations of such breeding animals will be produced practically as good as the purely bred. Of course, the food and care should be such as the improved condition of these animals would call for. This practice would bring about an enormous increase in the value of the live stock throughout Canada. This increase could be produced cheaply, and without the purchase of any more dams, providing that only those possessing the highest quality were used for breeding purposes.

The breeder should first determine from what particular breed he will choose his sires. Thereafter in all breeding operations he should persist in using sires from that breed only. If a sire is chosen from one breed one time and from another the next, there is no assurance that, what it has gained in the first, it will not lose in the second. There can be no stability of character produced by such indefinite breeding.

Crossbreeding is often recommended as a means of improving live stock. It has its place, but that place is not on the average farm. Crossbreeding was a necessity in forming new breeds, but after that its benefits end In the hands of unskilled thermatologists it becomes a menace to the production of improvement in breeding operations. There should be no place for crossbreeding in the ordinary practice of the farmer even in producing mere butcher cattle. Many potent reasons can be given in proof of this assertion. When pure breeds are crossed the progeny will not be as valuable as that of either of the breeds so crossed. It is true that sometimes superior individuality may be gotten in the progeny, but even so such animals are only worth market values for making meat, producing milk or growing wool. Besides, when purebreed females have thus been crossed, there is a possibility that they may not breed true to the type again.

Every progressive farmer should recognize the full value of the purebred and well-bred sire in improving his live stock. If he thinks that he can afford to go into purebred live stock altogether than he will require to purchase purebred dams as well. In every breeding operation the strictest attention should be paid to the mating. The merits and demerits of each animal should be closely judged, and an attempt should be made to mate the animals so as to bring as large a predominancy as possible of the superior qualities in the progeny. Animals that are both suffering from the same defect should never be mated together, since in the progeny this malformation will be found existing in still more intensified form.

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THE HORSE.

Points on Horse Management that are Sometimes Overlooked.

At the season of the year horses suffer greatly from the annoyance of flies, and blankets of gauzy material for the circulation of air should be used when out of doors; and darkened stables when in-doors will be the means of saving both grain and flesh, as well as the work of fighting these pests both in-doors and out. Thin skinned and highly nervous horses are so worried that they become almost insane without some protection from flies and motquitos when driving on the road or working in the fields.

The annoyance of the gad-fly or bot-fly can be greatly lessened by attaching a piece of cloth to the throat-latch of the bridle and extending down under the jaw and fastened to the bit-rings, so as to hang losely.

Many preparations as washes have been used for both cattle and horses, but they are generally too temporary to give universal satisfaction; therefore put thin blankets or nets on the horses when at work and hang curtains or gunny-sacking up to the doors and windows to darken the stalls in daytime, leaving sufficient spaces at the bottom of each for ventilation.

WATERING THE HORSE.

The question of watering horses is important, and one that is frequently answered in a number of different ways according to the individual opinions of the authorities consulted. One of the United States Department of Agriculture bulletins contains the following summary dealing with this question:

"The rations fed consisted of different mixtures of corn, oats, hay and stray, and a number of experiments were made in which the only condition that varied was the time of watering. In some of the tests the horses drank before and in some after eating, and in others after the grain portion of the ration was eaten, but before the hay.

So far as was observed, the time of drinking had no effect on the digestibility of a ration of grain and hay. When hay only was fed there seemed a slight advantage in watering before feeding. The general conclusion was drawn that horses may be watered before, during or after meals without interferring with the digestion and absorption of food. All these methods of watering are equally good for the horse, and each of them may be employed according to circumstances. It is obvious that certain circumstances may make it necessary to adopt one or the other method. For instance, after severe loss of water, such as occurs in consequence of long-continued, severe exertion, the animal should always be allowed to drink before he is fed, as otherwise he will not feed well.

It has been found that less water is required when the ration consists largely of concentrated feed than when large amounts of coarse fodder are consumed and it is a matter of common observation that less water is consumed when green, succulent feeds form a considerable part of the ration than when it consists of dry feed. That the amount of water taken, even in dry feed, may be considerable is shown by the fact that a ration of twelve pounds of oats and fifteen pounds of hay furnishes some twenty pounds of water. A succulent ration would furnish much more"

According to the extract just quoted the time of watering makes little difference. In supplying water to the horse before it is fed and after it has performed some hard work, too much should not be given. Horses suffer a great deal during hot weather on account of not being watered often enough. The horse's stomach is small and frequent watering is necessary for the health and endurance of the animals when working hard and prespiring freely. Some farmers take water to the field for the horses during hot weather and supply them with a little occassionally. Large quantities should not be given, however, or the horses health will be impaired.

WARM WEATHER SUGGESTIONS.

During the excessively hot weather the removal of the harness at noon will pay. When the horse comes in from the field in a lather of perspiration and is allowed to dry off, the danger from sore shoulders is greatly increased. The collar should be removed and the shoulder washed or at least dried off with a piece of cloth.

On many farms the horses are turned out to pasture over Sunday, and appreciate the change and holiday very much. Where for any reason this is not convenient a bran mash may be given on Saturday night with good results.

Everybody is suppose to know how to make a bran mash, but it is only in racing stables and large studs, as a rule, that one sees it done properly. To make a bran mash, first wash out a bucket with boiling waser, then pour in the quantity required, say three pints, and stir in three pounds of bran, cover up and leave it for a couple of hours or more if not required for immediate use. A mash takes houos to get cold, and is often offered to a sick horse too hot, and refused, when it would have been taken if properly prepared, and given warm insead of scalding. The addition of a tablespoonful of salt in the ordinary mash of a Saturday night can be recommended to keep down parasites and promote digestion, but should not be a part of the invalid diet, unless specially ordered. A mixture of linseed and bran is often prescribed both as a food and a poultice. One part of linseed or two of bran is a desirable proportion for both purposes. To get all the feeding value out of linseed, several hours should be allowed for cooking, not merely infusing, as with a bran mash, but gently "simmering" on the side of the stove. The vessel should be filled, and toward the end the lid may be left off, and evaporation permitted while cooling.

Much of the usefulness of the farm horse depends on the manner in which it is treated. Horses are susceptible to education, and the hired man or person in charge of the horse who does not realize this, is a serious obstacle in the way of successful farming. By proper handling the efficiency of a horse for work can be greatly increased. Rough, unreasonable treatment is not only a waste of time, but the horse is rendered nervous and excitable and is often injured to such an extent as to have its market value considerably reduced.—Horseman, Pictou Co., N. S.

Training the Horse.

It is easy to see the need of better training of horses. On every hand you see teams that are unsafe, or awkward or ignorant—all due to lack of culture.

Recently an old man, found innocent of the charge, was released from prison where he had been confined for 30 years He was put in an automobile and when the thing started he tried to climb out, he was so frightened. When he saw a street car he nearly went into spasms of fright Things on every hand struck terror into his sold because they were new to him. He lacked confidence because he lacked knowledge.

And so with the horse. He is struck with terror when he sees an automobile the first time. He exercises nature's way of seeking safety in flight—in runing away.

Just as the old ex-prisoner had to be quieted by the calm behavior and assurances of his companions so the horse must be calmed in the same way. A cut from a whip at such time only associates pain with the sight of the horrible thing and makes him worse instead of better.

A horse will apparently be broken and for years cause annoyance by his shying at every bit of paper or shadow or stone. He is not broken. His nervour system has never been brought under control.

It is natural for a horse to shy. In the wild state he owes his life to his ability to quickly jump sidewise when a wild beast or rattlesnake lurks by the way. It is the outcropping of that natural instinct for self preservation. Perhaps the foolish whippings he has received at such times has only intensified his fear of the shadow or paper.

The horse is a very nervous animal, especially the lighter breeds. Certain acts are reflex—that is, done without thought. Just as you wink when an

(Continued on page 000)

HORSEMEN ATTENTION!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. They cure Cough, Cold, Distemper, Colic, Glanders, Spavin, Pink Eye and all diseases of the Horse.

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Dear Sirs,—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months standing. In my large experience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends.

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BEAR RIVER, N. S.

DEAR SIRS,—

We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it.

Yours truly,

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POULTRY.

The Principles and Practice of Poultry Breeding.

(Continued from last issue.)

3. Exercise of Functions. As soon as the chick develops organs for blood circulation, food digestion and muscles for moving, there comes into play another set of influences in the life of the creature. It begins to use its powers and the exercise of the parts tends to the best development and maintaince of these functions. Excessive use or abuse of any of these powers tends to react disastrously upon the functions and upon the bird's whole organism. This matter is very largely within the control of the poultry breeder For example he may, by early hatching and high feeding, cause his pullets to develop rapidly, and begin laying while still quite young. The eggs of these precocious pullets will be found lacking in hatching quality to a considerable degree if the attemp is made to incubate them. If some of the eggs yield chicks they will usually prove to be weaklings. Moreover the pullets, after laying a while, will very likely begin to molt and delay further egg-production until the following spring, the natural nesting time of the birds. Thus even in a commercial way, the pullets prove the futility of the poultryman's plan for forcing egg-production at the expense of the development of the other functions.

Again the poultryman may, by close confinement of his adult fowls and by too generous a diet, especially of Indian corn, induce habits of laziness in his flock. The fowls lay on fat, their eggs become infertile, later egg-laying stops altogether, the birds stand about in idleness, they get listless, their system become clogged, they topple over and die of apoplexy. An entirely different result is secured simply by compelling the hens to take bodily exercise. By making them scratch for at least a part of their living, the circulation of the blood is increased, digestion is improved. there is flesh formation in place of fat deposition and active operation of all the bodily functions. The fowls are lively, springtly and healthy. Their eggs prove to be fertile and yield chicks which are vigorous, thrifty growers.

CO-OPERATION OF INFLUENCES.

The influences of the three great groups do not act separately and independently in the development, growth and breeding of the fowls. Rather are they commingled and combined in their action so that it is very difficult and oftimes impossible to determine just what influences have produced certain results in the animal organism.

Evidently there are some influences that the poultryman cannot control and others which are only partially under his command, but there remain many conditions which are entirely within his power to regulate. His part in the breeding of the beautiful and useful birds is to exercise his power of selection as applied first to the parent birds which are the medium of hereditary influences, second to the surrounding conditions of the breeding stock and the progeny and third to the management of the fowls in the use of their functions and productive powers.

Considering what a multitude of agencies are co-operating in the breeding and growing of a chicken, the poultry breeder is compelled to acknowledge that he can never know these factors too well if he is to learn to manage them successfully for producing perfect poultry.

Many men have given earnest thought and careful study to the problems of stock breeding. Some of the facts developed in the experience of breeders of domestic animals in the past, are stated in the following brief explanations of what are sometimes termed.

(Continued next issue.)

Blackhead in Turkeys.

In many localities turkey growing has become almost extinct as the result of the scourge known as blackhead. This disease was first noticed in New England, but quickly spread throughout the entire country. It first attacks the secum—the blind gut situated between the large and small intestines. It also attacks the liver, this organ becoming very much enlarged, often to twice its normal size, and showing over its surface discolored spots varying from one-eighth to two-thirds of an inch in diameter, shading in color from whitish lemon to dark yellow.

While this disease is attributed to microbes, it is thought to be very much aggravated or increased through in-breeding. In other words, many attribute the prevalence of what is known as blackhead to the depleted vitality of the stock of breeding turkeys making it possible for the germs to grow and gain destructive foothold.

Diarrhoea is the most marked and constant symptom, and may be expected sooner or later in the course of the disease; it results from inflammation and internal weakness. A peculiar discoloration of the head occurs when the disease is at its height which has led to the popular designation of the blackhead. This disease attacks very young turkeys and often lasts for several months before causing death.

The use of medicine has not proven very successful. Among the remedies most recommended are sulphur, sulphate of iron, quinine, and salicylic acid. Sulphur may be given, 5 to 10 grains being combined with 1 grain of sulphate of iron; or sulphur, 10 grains, sulphate of iron, 1 grain, and sulphate of quinine, 1 grain. It is necessary that such treatment be repeated two or three times a day and continued for considerable time to obtain results.

Some people who have had experience with this ailment in recent years believe that it results largely from in-breeding, the infection being transmitted from one flock to another by affected birds or eggs. The remedies applied proving of little benefit, the only alternative is the introduction of new, strong and healthy stock. Some have gone so far as to destroy their entire flocks, and having thoroughly disinfected the premises, started with new, healthy stock, while others have introduced wild blood into their flocks.

In all bowel trouble in turkeys, feeding boiled rice has proven of benefit, and it has been largely practiced by experienced growers. Many feed the boiled rice to the young poults to prevent the coming of the destructive diarrhoea.

The most successful way to obviate a dangerous looseness of the bowels is to avoid feeding wet and sloppy food and guard the young from taking cold. The feeding of small particles of charcoal is beneficial to the young from the fact that it sweetens the crop and gizzard and prevents fermentation, which is very injurious and destructive. Above all things, never make use of infected turkeys for breeding stock.—Farm Stock Journal.

Put Exhibitors Name on Entry Cards.

EDITOR MARITIME FARMER.

Do the management of exhibitions realize the injustice done to exhibitors and to the public by the rule "Name of exhibitor not to be shown until after the judging is done."

I hear some exclaim, "Injustice! why you'r crazy, its the only fair way." Wait a moment and think what that rule implies. Does it not imply that ownership of exhibits must be kept a secret until the judging is done?

How many respect that rule? just those who send their exhibits but can't come themselves. Often the judging is not finished until the last day.

Enforce the rule to the letter and you prohibit any of the big breeders from the chance of advertising their stock and making sales.

Carry the rule out and stop Logan and Dickie from showing their Holsteins, McMonagle his Jerseys, McIntyre Bros. their Ayrshires. Prohibit Craig, Jones, Reade, McMonagle or a host of others from showing their birds to admirers and prospective layers and how long would they exhibit. But how about the exhibitor who sends his stock and can't attend the show? Anyone wanting his stock may find out who owns it a week or so later through the columns of a paper printing the prize winners, but in the mean time he has bought from one of those who were on the spot ready for business even if it were before the judging was done.

The public has a right to know who owns the exhibits. Some would say that is not a fair way, sure to lead to partility on the part of the judges, why? If a judge were dishonest, is it not as easy to tip him on a number as on a name?

I am glad to be one who believes the judges are honest in their words even if I can't see eye to eye with them in all cases.

The shows are held to encourage the breeders and the greatest encouragement a bird can have is the sale of her stock and that can be helped by having the exhibitor's name shown on her entry cards.

I hope the plan will soon be adopted by all our shows in the Maritime Provinces, as it has been done with perfect success in some of the larger shoes in our sister provinces. EXHIBITOR,

Pictou Co., N. S.

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He issued orders to cut down the amount of meat and to increase greatly the quantity of Quaker Oats fed to the men.

He also boiled Quaker Oats and mixed the thin oatmeal water with their drinking water.

Almost instantly all signs of stomach disorders passed and his men showed a decided improvement in strength and spirits.

This contractor had experience that taught him the great value of good oatmeal. 53

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The Ordeal; or, the Spring and Mid-Summer of a Life.

(Continued from last issue.)

It was so provoking to be separated from Lucy, and to find the aisle blocked up with a quantity of women, after all; not a man among them, or even an acquaintance to whom she could say, "How ridiculous !" when Archie Cushing tripped on his gown and almost deposited himself on the floor of the stage; or, "What a pity !" when Ellis blushed and stammered, and lost the prompting that would have saved him from that awkward pause, fairly stage-blind at finding all that sea of faces turned up to his. And after a while, the band played again, and some gentlemen friends of the Martins pushed along and talked over her in such a loud, vulgar way. Altogether, Miss Jane did not find herself as pleasantly situated as her caste-loving, admiration-seeking nature could have desired.

And Lucy, who had aimed less selfishly, would have desired nothing better than she had found; she could see perfectly from her more remote corner of the pew; she had discovered her father next to Governor Green, his great friend and ally, in the fifth pew from the platform, as became so generous a patron of the college. She could see Henry, every now and then, moving about a little restlessly, for, after all the trouble he had taken to point out the most eligible seat to Miss Beckford, he was sure she would never be able to hear a word of his oration, with all those boys stamping about the gallery. What in the world did they allow such shavers to crowd up the church, any way ? Henry had forgotten how he walked after the fascinating trombone and cornet players in the days of his own youth, and had eaten nuts and apples in the midst of an equally interested audience.

But above all there was a face in full relief against the dark pillar by which it leaned, a pale face, with large, luminous eyes that sought the nook which sheltered her with a constancy and boldness unlike their late chance intercourse. Turn when she would, Carrol Austin was looking towards her, and now and then his face seemed to light with intelligence and an earnest warmth that startled her, he had seemed of late so reserved and unconscious of her presence. What would the stranger near her think? for she had evidently noticed those glances, as how could she help it? But it was his last day, poor fellow, and her heart sank down like lead with the thought, and she clasped her hands with a wringing, nervous gesture, and tried to forget it again. Only once could she banish the thought—when her brother came forward, with his firm, manly tread, such a contrast to the hesitancy of some and automaton stiffness of others, tossed his clustering hair from his forehead with his own careless grace, and, in clear, ringing tones, drew back the wandering attention, and moved the listless faces before him into interest in him and his theme. It was a real triumph, and Lucy felt her cheeks glow with pleasure, and smiled back to her father's energetic and delighted nod. Mr. Bradstreet would not have changed places with Governor Green himself, at that moment.

"It was my brother," said Lucy, simply, to the lady in the corner, for there was an answering sympathy in her quiet face, as the young girl turned, still flushed and excited.

A strange glow, a sudden trembling of the mouth, made Lucy wonder as she looked into the lady's eyes. The slender, ungloved hand was put out towards her own and then withdrawn. How the strange likeness to some familiar face puzzled Lucy again ! but it was only a fancy. The lady seemed very, very kind, as if she knew just how that little sister felt, when she whispered : "I congratulate you, my dear; I do not wonder that you are proud of him."

"Have you any relative in the class?" Lucy ventured to ask, for she wanted to see that smile again; it drew her towards the stranger irresistibly.

"My son—" but another speaker had appeared, and there was no time for explanation.

One more, and the Valedictory. A strange faintness came over Lucy, as she saw it was so near; she turned towards the fresh air from the window. The lady was very pale, too, and her eyes were fastened upon the stage, and her mouth had almost a painful compression.

How nobly dignified the tall figure of the Valedictorian seemed, in the sweeping folds of the silken robe that fell to his feet, as he stood for a moment without speaking! He did not trust himself with even a glance towards the dear face that was so near him now, but Lucy's eyes never left him until she felt a hand laid heavily upon her arm. The face beside her was bent down, and the frail figure was trembling with excitement. Lucy understood it all then; the revelation swept over her in a moment. She laid her hand in the long, slender fingers so unconsciously put forth, drew closer, closer to the bowed form, and whispered—"Mother !"

The craving, yearning for sympathy in that day's trials and triumphs seemed suddenly filled, and the two women, so lately strangers, clung to each other until the last word of farewell died sorrowfully away.

Even strangers were moved by the earnestness of tone, the high self-devotion of the aims they listened to; they felt that a noble purpose, and an unlooked-for maturity of experience had found voice, and good men blessed him in their hearts, when they heard he was to enter their ranks, and prophesied great usefulness in the field their strength had been spent upon.

"Throwing himself away; fine fellow as ever was," said Mr. Bradstreet to Governor Green, while the hum of complaint and favorable criticism sounded around him; and, in spite of the soreness, he had at times felt when Carrol's name was spoken, he scarcely knew which boy he was most proud of as he folded up his programme to hear the president's "few remarks."

Yes, Commencement was over, to all but the hungry men, anticipating the bountiful public dinner they were now at liberty to turn to, and the young girls, who were prepared to look their loveliest at the evening's levee. Jane Perkins beckoned to her friend, and to a passing escort at the same moment; Lucy and Mrs. Austin stood up together.

"I am so glad that I have seen you," said Lucy, shyly, her face covered with a quick blush as she remembered her exclamation. But the kind eyes looked so lovingly down upon her—Carrol's eyes ! and seemed like Carrol's voice, too, as the lady said :—

"I shall not forget you, my dear child."

Poor, sad-hearted, lonely Lucy! lonely for all her father's kindness and her brother's pride; sad for all the wealth that was her portion, and the envy that pointed her out as she moved among the gay throng at the evening's brilliant reception. It was here she first knew that Carrol loved her, here in this very room, as she sang "I do not love thee." How happy she was that night, leaning on his arm, as they passed out of the door together; and now she could not even speak to him; only a bow, and such a lingering look as they passed ! But her father was very kind. "It could not do any harm," he reasoned, as he thought that the boy was going to-morrow, and they could both be trusted.

"Good-evening, Carrol; you did well, to-day"—and he shook hands warmly. "I was proud of you. Can you take Lucy off my hands for a while? I must speak to my old friend, Senator Story."

So they were together once more, and alone, for no one remarked them in that busy crowd; and when they separated, with aching hearts, poor children, Lucy said: "Remember, Carrol, I will wait."

CHAPTER VI.

"I will wait."

It was a promise given unsolicited, one that he was too generous to trust, for he knew all that she would meet with when once society had claimed the rich man's lovely daughter as its own. The homage, real and insincere, the love that she could not fail to attract, her father's solicitude for her happiness, the natural result of time and absence in wearing away the vivid remembrance of him, and the disenchantment of a fuller appreciation, a woman's knowledge of all she must give up for his sake.

So Carrol Austin did not rest upon that parting valediction; but, in spite of reason and of will, it haunted and comforted him—not that he gave up to idle dreams—his life was too real, his work too earnest—but there were hours when the fulfilment of his noblest hopes seemed afar off, and the knowledge of all he was accomplishing for those who leaned on him, and the unswerving friendship of more than a mother's love, seemed insufficient to satisfy the craving for daily sympathy, for a nearer human companionship, and then the remembrance of these words came with a soothing, like the touch of a soft hand upon his forehead. Lucy had loved him well enough to say it and believe it, however life might change her purpose, and he held her free as air to do so, only praying that she might be happy.

Hal Bradstreet and Ella Beckford were both married, but not to each other. They had children growing up around them, and laughed lightly at their childish flirtations. Jane Perkins was a faithful, faded wife, selfishly, exacting, as such a nature could not fail to be in its full development ; and her friend Lucy could but wonder, and sometimes chide the restless mourning of a life that outwardly would seem to have every desire fulfilled.

Lucy Bradstreet still, Miss Bradstreet now living alone with her father, and entertaining his friends and the distinguished men he likad to gather around him with quiet dignity and composure, yet with the ease and grace of a woman of the world. No wonder that Governor Green used to say that she realized the old English epitaph

"Polite as she in court has ever been,
Yet good as she the world has never seen;

and it was especially kind, when it was generally supposed that she rejected him, confirmed old bachelor as he had beed considered.

Mr. Bradstreet did not advocate that marriage, flattering as the proposal was, for his friend had been groomsman at his own wedding, and though well preserved, could not be more than forty years younger than himself ; but it was rather annoying to see all suitors, however wealthy or humble, transform into steadfast friends. It never occurred to him that the foolish affair of ten years ago was underlying the reserve that so perplexed him. Lucy was the soul of truth, and he knew perfectly well she had never heard from young Austin, or he from her, unless indirectly, and he trusted to the wise man's saying, "Where no fuel is, the fire goeth out."

"We are to dine at Henry'y to-morrow, Lucy, if you have no engagement, to meet some distinguished individual, I believe."

Mr. Bradstreet gave the intelligence causally at the tea-table, and relapsed into the journal immediately.

"Did he tell you who, papa ?" Lucy asked with very little interest.

(To be continued)

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Be Good to Yourself.

EDITOR MARITIME FARMER.

It is a rare thing to find people who are really good to themselves. By saying this I do not mean that they shall be selfish or grasping, neither do I mean that they shall be indolent or lazy. We find that the men and women who master what they undertake, who approach their duties with the assurance of a conqueror and are able to grapple vigorously with life's problems, are good to themselves mentally—think well of themselves. Taking for granted that people live in a truly moral atmosphere, why are they not justified in so doing. How can we have too much respect for these bodies wherein lies the will and mind, that gives the incentive to do and dare.

Very few people think well enough of themselves, have half enough esteem for their divine origin, their abilities, their character. Have faith in yourself, believe in the brotherhood of man the fatherhood of God, deliberate wisely your course, take honesty and justice for your keynote, and in nine cases out of ten, yours will be a career where failure will never be written. There are some people who persist in seeing the weak side of themselves, who think they do not amount to much and never will, who are always exaggerating their own defects and see only the small beginnings. Such people never grow into that bigness of manhood, that grandeur of womanhood, God intended for them. Their souls are dwarfed, their minds weakened, their manners spoiled. Their appearance, their lives picture their poor opinion, they actually think themselves into littleness. Verily the old adage "as a man thinketh in his heart, so is he" applies most fitly. Whenever you think of yourself form a mental image of a healthy, beautiful, noble being not lacking in anything; then strive with all the force and ambition within you to bring yourself up to that standard, and having reached it, be diligent, indeed to sutain it. The estimate you have of yourself, the image you carry in your mind, means infinitely more to you than what others think. Busy people, people who have accomplished much, have no time to ponder over what gossips are saying. Their conscience is their director they have already established their ideal. Again if we would make the most of our lives, we must also be good to our bodies in order to produce minds capable of doing great things. It is our sacred duty to keep ourselves in condition to do the biggest thing possible. If you would amount to anything in this world value your time and energy. They are your success capital and you cannot afford to throw them away or trifle with them. The great aim of your life should be to keep your powers up to the highest possible standard, to so conserve your energies, gained your health, that you can make every occasion great. Again I repeat, if you would make the most of yourself, never picture yourself anything different from what you would actually be.

"To thine own self be true; thou canst not then be false to any man."—MRS. JAS. PORTER, Carleton Co., N. B.

Memory Gems.

Genius and virtue, like diamonds, are best plain set.—EMERSON.

The chase is always worth more than the quarry.—LESSING.

Each human soul is the first created inhabitant of its own Eden.
HAWTHORNE.

Action may not always bring happiness, but there is no happiness without action.—DISRAELI.

Virtue alone outbuilds the Pyramids; her monuments shall last when Egypt's fall.—YOUNG.

The soul's armor is never well set to the heart unless a woman's hand has braced it, and it is only when she braces it loosely that the honor of manhood fails.—RUSKIN.

LOCAL TREATMENT FOR WOMEN'S DISORDERS

The health we enjoy depends very largely upon how the blood circulates in our bodies; in other words, if we have perfect circulation we will have perfect health.

There is a constant wearing out of the tissues in every part of the body. The blood flowing through the veins carries off this waste or dead matter, while the blood coming from the heart through the arteries brings the fresh new living tissue, the essence of the food we have digested, to replace what has been carried off. This constant wearing out and expelling of the dead matter and the replacing of it with new matter, atom by atom, goes on day and night, until in about 7 years a complete change has been effected. Thus every man and woman has an entirely different body in every particle of it from what he or she had 7 years before.

It sometimes happens, however, from a variety of causes, that the blood becomes congested in certain portions of the body. This means that the blood vessels in these parts become weakened, and the circulation in that section of the body becomes sluggish and stagnant. The consequence is that the dead matter in that part of the body is only partially carried away, and that but little of the new, vital matter is introduced there to build up and strengthen the tissues and nerves.

This condition invariably exists in all cases of female disorders. The dead matter retained in the circulation, which should have been expelled, causes irritation and inflammation of the delicate memberane, and oppresses the nerve centres. This condition is the cause of the grievous physical and mental suffering which accompanies female troubles.

To obtain relief it is evident that the first thing to be done is to get rid of the dead matter which is being held in the circulation. If this dead matter is allowed to remain there a species of blood poisoning will result and nature will endeavor to get rid of it by forming ulcers, tumors, etc.

The above explanation will also show why ORANGE LILY is so successful in curing this condition. It is a local treatment, and is applied direct to the affected organs. Its curative elements are absorbed into the congested tissue, and from the very start the dead matter begins to be discharged. A feeling of immense relief, both mental and physical, accompanies it, and the improvement is constant and positive. This feature of the expelling of the dead matter is always present to a greater or less extent, and in some cases it is so marked as to be amazing The case described in the following letter is not exceptional:

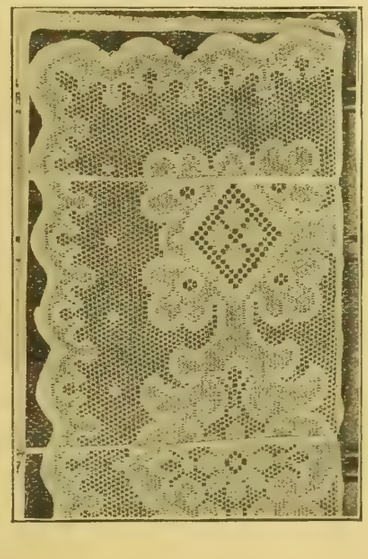
Dr. Coonley—I am thankful to Mrs. F. E. Currah, your Canadian representative, for my health restored by your wonderful remedy. I have suffered for 17 years, but not so bad until 3 years ago. Then I had a doctor, who told me I had a tumor, and could live no more than a year. If I went through an operation I would not live through it. A year later I sent for him again, and he gave me up to die. My husband then sent for another doctor, who performed an operation, and it did me much good. I doctored with him 3 or 4 months, but became so bad again that I thought I could live no longer, and I began to long to die. One day my husband came home and threw a slip of paper to me with Mrs. Currah's address and told me a lady had advised him to write to her for a treatment that would cure me. I said it was too late, that I would die anyway. I could not lift a teacup without hurting me. Then the first doctor told me I was worse than ever. However, my husband sent for ORANGE LILY, and the third treatment brought away one tumor. Others followed, until 7 tumors had been expelled, 3 large ones and 4 small ones. I know if it had not been for ORANGE LILY I would have died, for I could not live much longer. I would have thought it cheap at one hundred dollars for a month's treatment, instead of one dollar. It is worth its weight in gold.—MRS. GEO. LEWIS, Huntsville, Ont.

The above letter is published with Mrs. Lewis' permission. All letters received are treated as being sacredly confidential, but occasionally some patient feels so grateful for being cured that she is willing to make the matter known for the benefit and encouragement of her suffering sisters.

ORANGE LILY is a positive, scientific remedy for all disorders of the female functions. As explained above these troubles are of local origin, and require local treatment. It is just as sensible to take medicine internally for female troubles as it would be to take medicine internally for a bruise, a boil or an ulcerated tooth. In all these cases some dead matter is being retained, and the cure is effected by employing local methods for expelling the dead matter. ORANGE LILY has antiseptic, soothing and healing properties, and also tones up and invigorates blood vessels and nerves. I am so anxious that every suffering woman may satisfy herself, without cost to her, that ORANGE LILY will cure her, that I hereby make the following

FREE TRIAL OFFER

I will send, without charge, to every reader of this notice who suffers in any way from any of the troubles peculiar to women, if she will send me her address, enough of the ORANGE LILY treatment to last her ten days. In many cases this trial treatment is all that is necessary to effect a complete cure, and in every instance it will give very noticeable relief. If you are a sufferer, you owe it to yourself, to your family and to your friends to take advantage of this offer and get cured in the privacy of your home, without doctors' bills or expense of any kind. Address MRS. FRANCES E. CURRAH, Windsor, Ont. 7



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A pair of these Handsome and durable **Lace Curtains,** 3 yards long by 42 inches wide, together with a new or renewal subscription to the MARITIME FARMER, post paid, for **$1.40** or for **Two New Subscribers** at 80 cents per year.

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Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

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We're th largest Bagpipe dealers in North America.

Lawrie's famous make is the kind we sell.

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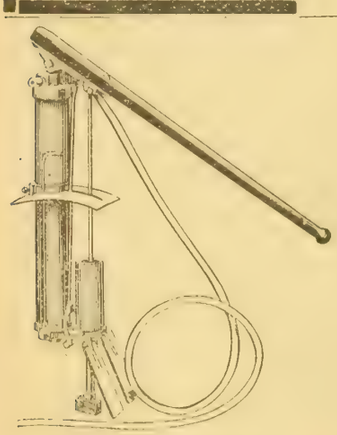

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"PERFECT" Spray Pumps

is found combined the best features of all other makes of pumps. In succeeding issues will be found a short description of a few of these points of excellenee.

Manufactured by

R. B. WESTHAVER,

MAHONE BAY, N. S.

Write for Catalogue.

Before we judge like God, let us see as He does, whose eyes are too pure to behold iniquity.—VINET.

Books are waste paper unless we spend in action the wisdom we get from thought.—LYTTON.

Who does the best his circumstances allow, does well, acts nobly. Angels could do no more.—YOUNG.

Learning hath gained most by those books by which the printers have lost. —A. WELSH.

Silence never shows itself to so great an advantage as when it is made the reply to calumny and defamation.—ADDISON.

Religion is the mortar that binds society together, the granite pedestal of liberty, the strong backbone of the social system.—DR. GUTHRIE.

The whole wild wood is one vast instrument of thousand keys; and all its notes come in sweet harmony, while Nature plays to celebrate the presence of her God.—H. F. GOULD.

A man of sense takes the time necessary for doing the work he is about well, and his haste in business only appears by the continuity of his application.—CHESTERFIELD.

As in the sun's eclipse we can behold the great stars shining in the heavens, so in life's eclipse have these men beheld the light of the great eternity burning solemnly forever.

LONGFELLOW.

Like acts upon like. Therefore, do not amend by reasoning, but by example; do not hope to excite love but by love. Be what you wish others to become. Let yourself and not your words preach.—Amiel's Journal.

Virtue will not grow unless its root be hidden, buried from the eye of the sun. Let the sun shine on it—nay, do but look at it privily thyself—the root withers, and no flowers will glad thee. —CARLYLE.

Who reads
Incessantly and to his reading brings not
A spirit and judgment equal or superior,
Uncertain and unsettled still remains.
—MILTON.

Oh ! many a shaft at random sent
Finds mark the archer little meant,
And many a word at random spoken
May sooth or wound a heart that's broken. —SCOTT.

That man is freed from servile bands,
Of hope to rise or fear to fall;
Lord of himself, though not of lands,
And having nothing, yet hath all.
—WOTTON.

The study of literature nourishes youth, entertains old age, adorns prosperity, solaces adversity, is delightful at home and unobtrusive abroad, deserts us not by day or night, in journeying nor in retirement.—CICERO.

To live in the presence of great truths and eternal laws, to be led by permanent ideals—that is what keeps a man patient when the world ignores him, and calm and unspoiled when the world praises him.—BALZAC.

No human being can come into this world without increasing or diminishing the sum total of human happiness, not only of the present, but of every subsequent age of humanity.—ELIHU BURRITT.

Blessed is the man who has the gift of making friends, for it is one of God's best gifts. It involves many things, but above all is the power of going out of one's self and seeing and appreciating whatever is good and noble in another man.—THOMAS HUGHES.

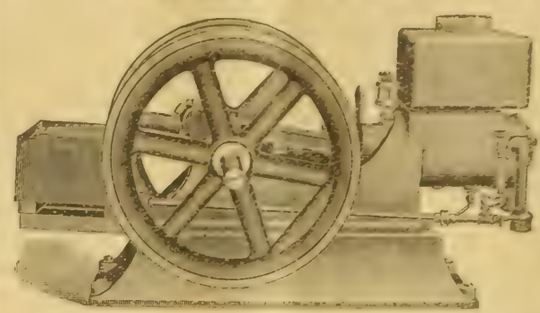
Not a day passes over the earth but men and women of no note do great deeds, speak great words and suffer noble sorrows. Of these obscure heroes, philosophers and martyrs, the greater part will never be known till the hour when many that were great shall be small and the small great.—CHAS. READE.

All that we are is the result of what we have thought—it is founded on our

WE WANT AGENTS RIGHT AWAY

In every section in the Maritime Provinces where a gasoline Stationary engine can be sold. The one we have to offer, which appeals most to farmers, is the

"Waterloo Boy"



Frost Proof Stationery Engine.

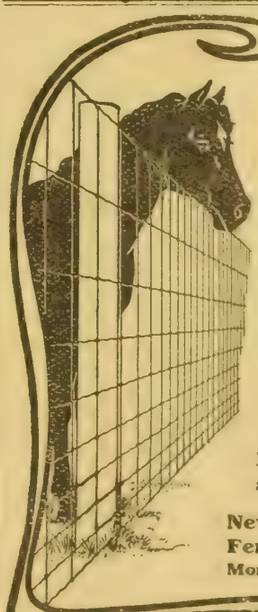
These Waterloo Engines are well and substantially constructed of the best material, by skilled mechanics, and are so durable that the makers have no hesitancy in extending to users their five years' guarantee. Engines are built on the interchangeable plan, all parts being made from jigs and templates, each and every part of the same kind being perfect duplicates, so in future years repairs that may be required can readily be placed without delay.

All the working parts are exposed to view and the duty of each part is readily understood by the user of the engine. The construction of these engines is such that they combine great strength and durability, yet it has been the manufacturers constant study to do away with all extra parts and simplify the construction as much as possible.

If you are looking for a good, reliable and up-to-date gasoline engine to handle—one which sells itself and leaves you a fair margin—write to-day for particulars.

Empire Cream Separator Co.,

Eastern Warehouse - SUSSEX, N B.



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The wire for "Maritime" Wire Fence is imported direct from England. We have found that this English wire is distinctly superior. While stiff and hard it is not brittle, or as easily broken when subjected to a severe strain as the ordinary hard steel wire. It is real "live" wire, pliable and springy, capable of withstanding hardest usage and unaffected by any degree of temperature recorded in this country.

Will you let us mail you our **free catalogue** which tells more about Maritime Fence and its absolutely secure lock?

New Brunswick Wire Fence Co., Limited.
Moncton, New Brunswick

MARITIME WIRE FENCE

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MONUMENTS

Consult J. J. MacLEOD,

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Manufacturer and Designer in all the best grades of Marble, Granite and Freestone. All orders will receive careful attention and prompt delivery. Good workmanship at lowest prices.

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PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

thoughts. If a man speaks or acts with an evil thought, pain follows him as the wheel follows the foot of him who draws the carriage. If a man speaks or acts with a pure thought, happiness follows him like a shadow that never leaves him.—DHAMMAPADA.

Beautiful sights are like visions of the Spirit. They throw open the windows of the chamber of our small selfishness, and let in a breath of that air that rushes round the rolling sphere and for a while illuminates our darkness with a far-off gleam of the white light which beats upon the Throne.—RIDER HAGGARD.

If there be some weaker one,
Give me strength to help him on;
If a blinder soul there be,
Let me guide him nearer Thee.
Make my mortal dreams come true
With the work I fain would do.
Let me find in Thy employ
Peace that dearer is than joy;
Out of self to love be led
And to heaven acclimated,
Until all things sweet and good
Seem my natural habitude.
—WHITTIER.

FREE FREE

This elegant watch, ladies' or gents' size, stem wind and set, fancy engraved cases, **fully guaranteed**, will be sent to you **ABSOLUTELY FREE**, if you will sell only $3.00 worth of **Lovely Picture Post Cards**, 6 for 10c. These are the most artistic, beautifully colored and embossed cards issued this season. **Views, Mottoes, Floral, Holiday, &c.** These are the fastest sellers. Get the best. Write to-day and we will send you a package. Sell them and return the money and win this **Handsome Little Watch**. You can also win a lovely **Tea Set FREE** if you will help us to enlarge our business by getting only 6 other agents and without having to sell any more goods.

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To Bring Him Back to the "High-Stepping" Class

THE REMEDY USED ALL OVER THE WORLD

For Spavin, Curb, Splint, Ringbone, Soft Bunches, All Lameness

Horse dealers have made thousands of dollars by buying Lame, Spavined Horses, curing them with Kendall's Spavin Cure, and then selling the sound animals at a handsome profit.

You can do the same with your own horses. Here is one man who saved his horse and his money by using **Kendall's.**

Oak Bay Mills, Que., Dec. 15th, 1909
"I wish to inform you that I have used Kendall's Spavin Cure with good success, on my horse. I found that it cures quickly and well". Yours truly, ROY HARPER.

$1. a bottle—6 for $5. A copy of our book—"A Treatise On The Horse"—free at dealers or from us. 48

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Up-to-Date Specialties For Farmers And Gardeners.

Things you need—implements and tools that should be on every truck garden and farm. Our way of making these specialties assures adaptability, strength and service at the minimum price for the best goods of their kind on the market

"TRUE" Wagon Box and Rack

Without wings and ladder, it is a perfect wagon box. With them, it is the best Hay, Stock, Wood, Poultry, Corn or Fruit Rack ever invented. Adjusted to any position in a minute without wrench, hook or rope.

"EureKa" Churn

Barrel of finest stoneware—top of clear pressed glass. Churns by hand lever. The only sanitary churn made. 3 sizes—8, 10 and 12 gallons.

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will slice or shred from 1 to 2 bushels per minute. Fastest machine made—easiest running. Tapering cylinder—10 best steel knives.

"EureKa" Combination Anvil

Best iron anvil, with vice, pipe vice and drill attachment, and saw clamps. Just what you need for repairing tools and machinery. Weighs 60 pounds.

The "Bacon" Seed Drill

will handle the most delicate seed without bruising or breaking, and will sow evenly to the last seed.

Write for Catalogue

Every farmer, who wants to make money out of his farm, ought to have our new catalogue. It shows our TOOLS, Rakes, Hoes and Machines as they are, and describes their construction in detail Write for free copy.

The EureKa Planter Co., Ltd. Woodstock, Ont.

Hartland Poultry Show.

The third show of the Carleton and Victoria Poultry Association was held in Hartland on the 10th and 11th. To say it was a success is scarcely enough. The entries were nearly double of former years and the pleasing feature was the participation of the farmers. This association is featuring utility stock and the farmers are showing their appreciation. Mr. Hillhouse of Burdville, Quebec, represented the Dominion Department of Agriculture and at the public meeting gave a splendid address upon the work of the Poultry Producers Assoociation. It is likely a branch of the Association will soon be organized at Hartland. The attendance was away in excess of other years. The old veteran of poultry work in Northern New Brunswick, Geo. E. Baxter was present and was happy in the sucess of the association with which he has been so closely identified. Following is the prize list which speaks for itself.

Note,—c, cock; h, hen; r, cockerel; p, pullet.

Barred Plymouth Rock, Mrs. H. Cochrane, 1 c; 3 h; 1, 2, 3 p; 3, r, Thos. Thistle 2 c; Hartland Poultry Yards, 1, 2 h; R. B Hagerman, 1, 2 r.

White Plymouth Rock, Hartland Poultry Yards, 2, h; W. J. Davis, 1 r, 1, 2 p; Kidney Bros., 1 h.

White Wyandottes, R. B. Hagerman, 1,c, 1, 2, 3 r, 1, 3 p; J. V Jackson, 2 c, 2 h; H. Kennedy, 3 c, 1, 3 h; Kidney Bros, 2 p.

Buff Wyandottes, Kidney Bros , 1 c,; 1, 2, 3 h; 1, 2 r; 1, 2 p; J. Burton Taylor, 2 c; 3 h; 3 r.

Golden Wyandottes, H. Kennedy, 1 c 1 h; Geo. H Seamen, 2 c, 2 h. 1, 2 p; Kidney Bros. 3 c, 3 h. 3 p.

Black Wyandottes, Hartland Poultry Yards, 1 h.

Single Comb R. I. Reds, R. B. Hagerman, 1, 2, 3 c, 1. 2, 3 h, 1, 2 r, 1. 2 p; Chas Bull, 3 r.

Rose Comb R. I Reds, Hatfield Shaw, 1 c, 2 p; Kidney Bros., 2 c. 1, 2 h, 1 r; Roy Plummer, 1 p,

Light Brahma, H. Kennedy. 1 c, 1, 2 h; Hartland Poultry Yards, 3 h, 1 p.

Buff Cochins, Hartland Poultry Yards, 1 c, 1, 2, 3 h, 1, 2 p.

Partridge Cochins, Hartland Poultry Yards, 1, 2 h.

White Cochins, Hartland Poultry Yards; Kidney Bros., 1 h, 1 r.

Black Langshan, Rev. J. H. Copeland, 1 c, 1, 2, 3 h; Hartland Poultry Yards, 1, 2 r, 1, 3 p.

White Langshan Rev. J. M. Mallory, 1 c, 1 h, 2 r, 1, 2 p; Hartland Poultry Yards, 1, 3 r. 3 p.

Silver Grey Dorking, Hartland Poultry Yards, 1 c, 1 p.

White Dorkings, Kidney Bros., 1 c, 2 h.

Colored Dorking, Hartland Poultry Yards, 1 h

Blue Andalusian, H. Keswick, 1, 2 c, 1, 2, 3 h; E. C Morgan, 1, 3 r, 1, 2, 3, p; Harland Poultry Yards, 2 r.

Red Caps, Eugene Phillips, 1 c, 1, 2, 3 h; Hartland Poultry Yards. 2 c.

Buff Orpington, Hartland Poultry Yards, 1, 2 c, 1, 2 h; A. Blackil, 1, 2 r, 1 p; J. B. Taylor, 3 h; Geo. DeLong 3 r, 2 p; H Kennedy, 3 p.

Black Orpington, Rev. J. H. Coleland, 1 c, 1, 2 h; Hartland Poultry Yards, 1. 2 p.

Golden Polish, Hartland Poultry Yards, 1 c. 1, 2 h, 1, 2, 3 p, 1, 2 r.

Silver Polish, Hartland Poultry Yards, 1 c, 1 h, 1 r.

S. S. Hamburgs, Kidney Bros., 1 c, 1, 2 3 h, 1 r, 1, 2, 3 p.

Black Hamburgs, Hartland Poultry Yards, 1 h.

Houdan, Hartland Poultry Yards, 1 c, 1, 2 r, 1 p; Kidney Bros, 1, 2, 3 h, 2, 3 p.

Ermine Faverolles, Kidney Bros., 2 c. 1 h.

Salmon Faverolles, Hartland Poultry Yards, 1 h.

B. B. Red Game. Hartland Poultry Yards, 1 h, Pet Game, Hartland Poultry Yards, 1, 2 h.

S. C. Brown Leghorn, Hartland Poultry Yards 1 c, 1, 2, 3 h; Kidney Bros , 1 r, 1, 2, p; E. A. Belyea, 3 r, 3 p; Carl Rigby, 2 r.

R. C. Brown Leghorn, Hartland Poultry Yards, 1c; 1, 2, 3 h; 1 r; 1, 2 p.

S C. W. Leghorn, Hartland Poultry Yards, 1, 2 c, 1, 2, 3 h, 1, 2 r; A. Blackie, 1, 2 p; H. Keswick, 3 p.

R. C. W. Leghorn, Hartland Poultry Yards, 1, 2, 3 h. 1. 2, 3 r, 1, 2 3 p

S. C. Buff Leghorn, Kidney Bros. 1 c, 1, 2 h; Geo. H. Seamen, 1 r, 1 p.

Black Leghorns, Hartland Poultry Yards, 1 c, 1 3 h, 1 r, 1 p; Kidney Bros, 2 h, 2 p.

S. C Black Minorcas, Hartland Poultry Yards, 1, 2, 3 h, 2, 3 r, 2. 3 p; E. T. Shaw, 1 r, 1 p.

R. C, Black Minorca, Hartland Poultry Yards, 1 h, 1 r.

S. C, White Minorcas, Hartland Poultry Yards 1, 2 c, 1, 2, 3 h, 1 r, 1, 2 p

W. F. Black Spanish, Hartland Poultry Yards, 1 c, 1, 2. 3 h, 2 r, 1, 2, p.

Ancona, H. Kennedy, 1 c, 1 h, 1 r, 1, 2 p.

La Fleche, Hartland Poultry Yards, 1 h.

Golden Seabright Bantam, Hartland Poultry Yards, 1 c. 1 h.

Buff Cochin Bantam, Hartland Poultry Yards, 1 c, 1 2 h

Black Cochin Bantam, Hartland Poultry Yards, 1 h; J. V. Jackson, 1 c, 1, p; Geo. H. Seamen, 2 r, 2 p.

Partridge Cochin Bantam, Hartland Poultry Yards 1 c, 1 h

Pyle Game, Hartland Poultry Yards, 1c, 1 r.

Black B. B. Game, Hartland Poultry Yards, 1 c, 1 h.

Black Tailed Japanese, J. V. Jackson, 1 r, 1 h.

BREEDING PENS, ADULTS.

B. Rocks, Hartland Poultry Yards, 1.
Buff Wyandottes, Kidney Bros, 1.
White Leghorns, Hartland Poultry Yards, 1.
S. S Hamburg, Kidney Bros., 1.
Houdans, Kidney Bros, 1.

BREEDING PENS, CHICKS.

B. Rocks, Mrs. H. Cochrane.

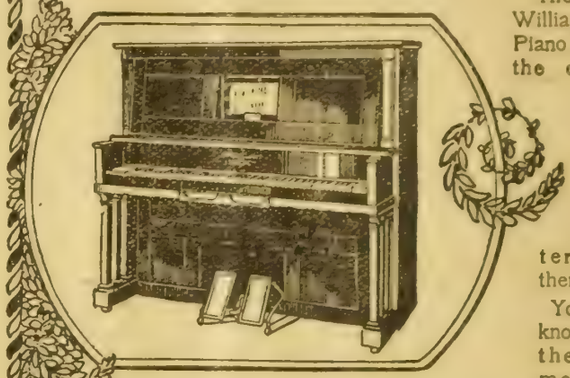
NEW SCALE WILLIAMS PLAYER PIANO

answers that oft repeated statement "of what use would a Piano be in our house? Nobody can play".

The fingers of the great pianists are but highly trained pieces of mechanism. It is the soul of the artist, communicated to the fingers, which plays the music.

The New Scale Williams Player Piano gives you the fingers of the masters. The years of drudgery of practice—the expense of teachers—are wiped away.

The man and woman, who had not the time or opportunity to train their fingers, can still produce the music that is a part of their being.



The New Scale Williams Player Piano brings forth the enchanting melodies of the masterpieces of music just as the masters wrote them.

You—without knowledge of the purely mechanical part of piano playing—can still put into this music all the soulful expression which you possess.

New Scale Williams Player Piano is the universal storehouse of music. Playing 88 notes, it reproduces everything that has been written for the piano—the classics, grand opera scores, favorite hymns, songs and melodies in a lighter vein.

We make both the 88 and 65 note New Scale Williams Player Piano in Louis XV, Mission and other handsome designs.

Our richly illustrated booklets show the wonderful mechanism of this Player Piano and give descriptions in details. Write for free copies and also our plan of easy payments.

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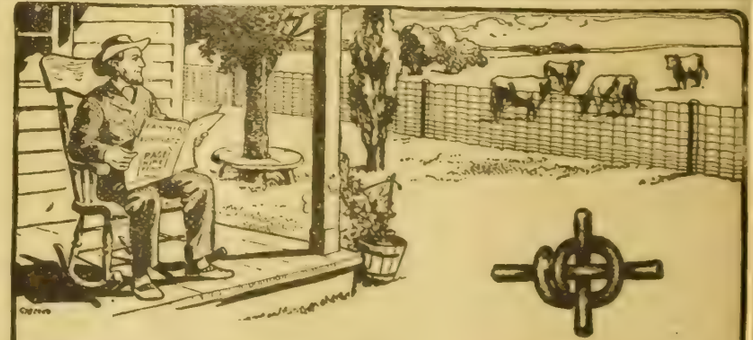

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73,000 Page Gates in Canada — double-braced truss frames, that cannot sag; galvanized so rust can't touch them; need no repairs; good for a life-time.

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You can get more for your money than you ever could in buying fence for any purpose—lawn or farm. Our free Booklet shows you how and why. Just ask our nearest place for your copy.

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Buff Orpingtons, Geo. DeLong, 1.
S. C. Brown Leghorns, Kidney Bros. 1.
S. C. White Leghorns, Andrew Blackie, 1,
R. C Reds, Kidney Bros., 1,
White Wyandottes, Kidney Bros., 1.

LIVE UTILITY POULTRY.

White Wyandottes, pair p, 1, Kidney Bros.
Buff Wyandotte, pair r, 1, Kidney Bros.
Brown Plymouth Rocks, E T. Shaw, pair r, 1; H. Rogers. pair r, 2; R. B. Hagerman, pair p, 1; A. Blackie, pair, p 2
Buff Orpingtons, Geo, DeLong, pair p, 1.
Rhode Island Reds, pair r. 1, Kidney Bros; pair p, 1. R.B. Hagerman; pair p. 2, Chas Oliver.

UTILITY PENS.

B. P. Rocks, Geo. E. Baxter, 1 and 2; Rev. J. M. Mallory, 3.
Heaviest grade turkey, 1, Kidney Bros.
Heaviest grade duck, 1, Kidney Bros.
Pen utility grade fowl, Rev. M. Mallory, 1; Roy Leiper, 2; Kidney Bros., 3.
Turkeys, pure bred, Bronze, Odbur Shaw, 1; Kidney Bros., 2.

GEESE.

Embden, Kidney Bros., 1.
African, Kidney Bros., 1.

DUCKS.

Pekin, J. V. Jackson, 1; Hartland Poultry Yards, 2.
Rouen Kidney Bros., 1.

ORNAMENTAL.

Guinea fowl, Pearl, Hartland Poultry Yards. 1; Kidney Bros, 2.
Guinea fowl, White, Kidney Bros., 1.
Pearl fowl, H. Rogers, 1.
White rabbits, Kidney Bros , 1.
Pigeons, fan tail, 1, 2 and 3, Kidney Bros.
A. O. V., Thos. Parkburst, 1; Roy Leiper, 2.

DRESSED POULTRY.

Pair, Kidney Bros., 1; Hartland Poultry Yards, 2.
Display, Hartland Poultry Yards, 1.

DOGS.

Collie, Hartland Poultry Yards, 1,
Cocker Spaniel, Hartland Poultry Yards, 1,

One can of Louse Powder to each by Zluser Disinfectant Co., Detroit, Mich,
Best pair P. Rocks, W. J. Davis,
Best pair Wyandottes, R. B. Hagerman,
Best pair R. I. Reds, R. B. Hagerman,
Best pair Orpingtons, Andrew Blockil.
Best pair Red Caps, Eugene Phillips.
Best pair Brahmas, H. Kennedy,
Best pair Langshans, Rev. J. M. Mallory.
Best pair Houdans, Hartland Poultry Yards.
Best pair Leghorns, Hartland Poultry Yards.
Best pair Minorcas, E. T. Shaw,
Best pair Ducks, J. V. Jackson.
Best pair Geese, Kidney Bros.

One can ointment to each by A. J. Morgan, London, Ont.
Best Game Hen, Hartland Poultry Yards,
Best Dark Brahma Hen, Hartland Poultry Yards.
Best Buff Leghorn, Kidney Bros.
Best Cochin Hen, Hartland Poultry Yards.
Best Hamburg Hen, Kidney Bros.
Best Polish Hen, Hartland Poultry Yards.

One subscription each to American Poultry Journal.
Best display of Eggs, Mrs. H. Cochrane.
Best display of Dressed Poultry, Hartland Poultry Yards.
Best display of Grade Fowls, Rev. J. M. Mallory.
Best display of Turkeys, Odbur Shaw.

One subscription each to Reliable Poultry Journal.
Best exhibit of Leghorns, Hartland Poultry Yards.
Best exhibit of Wyandottes, R. B. Hagerman.

One package Roup Cure to each by Geo. E. Goudey.
Best Wyandotte Hen, H. Kennedy.
Best R. C. Leghorn Hen, Hartland Poultry Yards.
Best Minorca Hen, Hartland Poultry Yards.
Best Houdan Hen, Kidney Bros.
Best Andalusian Hen, H Keswick.
Best Bantam Hen, Hartland Poultry Yards.

One subscription each to Woodstock Press.
Best pen P. Rocks, Mrs. H. Cochrane.
Best pen Leghorns, Hartland Poultry Yards.
Best pen Wyandottes, Kidney Bros,
Best pen Orpingtons, H. Kennedy

One subscription each to MARITIME FARMER.
Best pair Bronze Turkeys, Odbur Shaw.
Best pair Grade Turkeys, Kidney Bros.
Best exhibit Ornamental Turkeys, Kidney Bros.
Best pair Pekin Ducks, J. V. Jackson.
Best pair Rouen Ducks, Kidney Bros.
Largest display of any one breeder, Hartland Poultry Yards.
Best display of Black Birds in show, Rev J. H. Copeland.
Best display Water Fowl, setting of eggs, by H. Kennedy, won by Kidney Bros.

One year subscription each to the Standard.
Best Barred Rock, r, R. B. Hagerman.
Best R. C. Leghorn, r., Hartland Poultry Yards.
Best Houdan, r., Hartland Poultry Yards.
Best Langshan, r., Rev. M. Mallory.
Best Brahma, p., Hartland Poultry Yards.
Best Rhode Island Red, p., R B. Hagerman.
Best R. C. Leghorn, p., Hartland Poultry Yards.
Best Langshan, p., Hartland Poultry Yards.

One roll of Wire by Pittsburg Wire Fence Co., for largest display of pure-bred Poultry, Hartland Poultry Yards.

Robe by Bolarim Bros., for Champion Male bird, R. B. Hagerman
Concertina by C. R. Watson, for Champion Female, bred, W. J. Davis.

$1 00 cash by Donald Munroe, M. P. P.

Best best exhibit American class, R. B. Hagerman.
Best exhibit Mediterranean class, Hartland Poultry Yards.

They Pass the British Government's Acid Test for Galvanizing

Do you know that PRESTON Safe-Lock Shingles are the ONLY kind you can buy that are made according to British Government Specifications for Galvanized Sheet Metal?

The British Government is the most particular buyer in the world. The sheet metal it buys for public works must be made and galvanized far better than ordinary sheet metal.

Each sheet must be carefully sheared to exact dimensions, thoroughly cleaned, and afterwards galvanized with best Virgin Spelter, which must consist of not less than 98 per cent. pure zinc—Extract from British Government Specifications.

Each steel sheet is cut to the exact size of a PRESTON Shingle before it is galvanized with 98 per cent. pure zinc. In this way even the edges are thoroughly galvanized.

The sheets must be heavily and uniformly coated with zinc.—Ex. from B. G. S.

Ordinary galvanized sheets are not nearly so heavily coated with zinc as those galvanized according to British Government Specifications. To secure a thin coating the spelter is heated to a very high temperature. When the steel sheets are dipped into it only a small portion adheres to the surface.

Your eye cannot tell a thinly coated sheet from one heavily coated. That is why there are such a lot of cheap steel sheets on the market. They are considered good enough for ordinary shingles. But they couldn't pass the rigid specifications required of the steel sheets we use for PRESTON Shingles.

The steel sheets for PRESTON Safe-Lock Shingles are dipped into spelter kept at a lower and correct temperature. The sheets thus become very heavily coated. And, the coating is made perfectly smooth and even.

The sheets must stand bending without cracking the galvanizing.—Ex. from B G. S.

Unless the steel sheets for PRESTON Shingles were of perfect quality and galvanized according to British Government Specifications not only would the galvanizing crack, but the metal also, where our top lock is folded to produce three thicknesses of metal. Look at a PRESTON Safe-Lock Shingle and you'll find the steel and the galvanizing perfect at our top lock as well as everywhere else on the shingle.

THE ACID TEST

The galvanizing must be able to stand the test of dipping the sheet into a solution of sulphate of copper at a temperature of 60 degrees Fahrenheit, allowing it to remain in the solution for the space of one minute, and then withdrawing it and wiping it clean. The galvanizing must allow of this being done FOUR *times without showing signs of a reddish deposit of Copper.—Ext. from B G. S.*

The reddish deposit shows up the thinly galvanized spots. Ordinary galvanized sheets, treated to this test, would be thickly spotted with reddish deposits. Yet you are asked to pay the same prices for shingles that cannot pass this test as you are for PRESTON shingles, which will easily do so.

This Acid Test is more severe on the galvanizing than twenty years of Canadian weather. You see, sheet steel galvanized according to British Government Specifications is galvanized to last. PRESTON Shingles are good for twice the service of ordinary galvanized shingles.

The construction of PRESTON Safe-Lock Shingles is far ahead of all others.

Other shingles merely slip or slide together at the sides and are easily pulled apart. PRESTON Shingles are securely locked together at the sides on the principle of the "sailor's grip." The heavier the strain, the firmer the grip. You cannot pull them apart.

The top lock of PRESTON Shingles is TWICE as strong as our wonderfully secure side lock.

The top of the shingle is where the greatest strain falls. PRESTON Safe-Lock Shingles have a top lock consisting of three thicknesses of sheet steel, so that they can easily withstand the strain due to shrinking of sheeting or settling of building.

No other shingles can have such a top lock, because this feature is patented by us. The top lock of most shingles isn't as strong as the side lock of ours.

Lightning causes the loss of thousands of dollars each year to Canadian farmers. With every PRESTON roof you get a FREE Lightning Guarantee which secures you against this terrible destroyer.

You do not get a Free Lightning Guarantee with other shingles. Neither do you get shingles safe-locked on all four sides. Nor shingles with the nailing fully protected against the weather. Nor shingles made according to British Government Specifications. Nor shingles so easy to lay.

We have just issued a new booklet "Truth About Roofing." We should charge something for this, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us. Just you send it to-day.

METAL SHINGLE AND SIDING CO., LIMITED

Head Office, 41 King Street Factory.
PRESTON, ONT. 2

Branch Office and Factory, Montreal, Que.

PRESTON SAFE-LOCK SHINGLES

Please send me your new booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles.

Name _____

P.O. Address _____

County _____ Prov. _____

"SILVER PLATE THAT WEARS"
For Nearly 60 Years.

Spoons, Forks, Knives, etc., giving the best satisfaction, have been known by the trade mark

"1847 ROGERS BROS."

When buying silverware, it will pay you to see that each piece is so stamped.

In buying Tea Sets, Dishes, Tureens, etc., ask for the goods of

MERIDEN BRITA CO.

Fine Dairy Farm For Sale

Within 1-2 Mile of Sussex Station

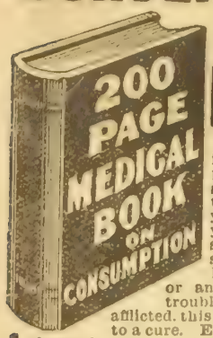
Two Hundred Acres.

Modern buildings of ample capacity, all arranged for convenience. Land in splendid state of cultivation. Yield an average crop of 100 tons of hay, 900 bushels grain, 1300 bbls. turnips, 100 bbls. potatoes, renders pasture and green feed for 25 head cattle and herd of swine and paddocks for colts. Also wood lot.

For further particulars apply to

S. J. GOODLIFFE, - SUSSEX, N. B.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1512 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

Hunters and Trappers

WILL GET THE

Best Market Price, Honest Treatment, Correct Assortment, Quick Returns.

by shipping their

Raw Furs and Skins

TO

REVILLON FRERES

ESTABLISHED 1723

the old reliable Firm of the Fur Trade.

134 and 136 McGill St. Montreal.

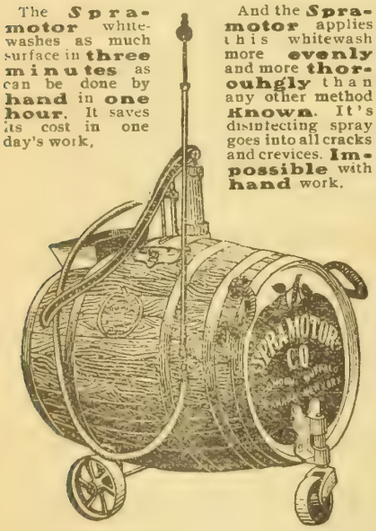
Ask for our Free 1909-1910 Price List.

WE PAY EXPRESS CHARGES.

Whitewashes 20 Times Quicker Than by Hand.

The **Spramotor** whitewashes as much surface in **three minutes** as can be done by **hand** in **one hour**. It saves its cost in one day's work.

And the **Spramotor** applies this whitewash more **evenly** and more **thoroughly** than any other method **known**. It's disinfecting spray goes into all cracks and crevices. **Impossible** with **hand** work.



The **Spramotor** is easily handled. Swivel castors, on strong wheels, permit it to be turned in any direction.

Simple in construction. Nothing to get out of order. No mechanic necessary to operate the **Spramotor Junior.**

10,000 sold in the last 5 years. 90,000 lbs. (45 tons) paint applied by N. Y. C. Ry. at Buffalo, N. Y. It's worth while to find out about it.

We are anxious to **prove** this to you. So write **to-day** for interesting **free booklet.**

Paint formula and directions with machine.

AGENTS WANTED

W. C. HEARD,

1378 King St., - London, Ont.

Best exhibit English class, Hartland Poultry Yards.
Best exhibit Asiatic class, Hartland Poultry Yards.
Best exhibit Bantam class, Hartland Poultry Yards.

$1.00 cash by a Friend.
Whitest bird in show, W. J. Davis.
Best exhibit by breeder not winning first in 1909 H. Kennedy

One pound of Tea to each, by H R. Nixon.
Best dressed pair of Ducks, Kidney Bros.
Best pair Chicks, any cross, Rev. J.M. Mallory.
Best display Water fowl, Kidney Bros.
Best display Turkeys. Obdur Shaw.
Best Ornamentals, Kidney Bros.

Best colored breeding pen B. Rocks, setting of Eggs, by Hartland Poultry Yards. Won by Mrs H. Cochrane.
Heaviest Bird in Show, Umbrella by Fraser, Fraser & Co. Won by F. Thistle.
Best White Wyandotte cock, hen, cockerel and pullet, Coffee Pot by Jas. Montgomery. Won by R. B. Hagerman.
Best Barred Rock cock, hen, cockerel and pullet, Lemonade Sett, by Baird and Craig. Won by Mrs. H. cochrane
Best Rhode Island Red cock, hen, cockerel and pullet, Berry Dish by C. H. Taylor. Won by R. B. Hagerman.
Best Minorcas cock, hen, cockerel, pullet, pair Mitts, by John McLaughlin & Co. Won by Hartland Poultry Yards.
Best Brown Leghorn cock, hen, cockerel, pullet, Salad and Cake Dish by C. H. Taylor. Won by Hartland Poultry Yards.
Best White Leghorn cock, hen, cockerel, pullet, Bells, won by Hartland Poultry Yards.
Best pen Guinea Fowls, Columbia Wyandotte Eggs by Dr. Webster Picton. Won by Hartland Poultry Yards.

The Harris Abbator Co., Toronto, 1 bag of their Poultry Feed Products to each.
Male bird rose comb, with best heads, R B. Hagerman.
Male bird, single comb, with best head, Hartland Poultry Yards.
Male bird crested, with best head, Hartland Poultry Yards.
Best Buff colored bird, either sex, A. Blackie.
Best Spangled bird in show, Kidney Bros.

$1.00 cash to each, by Geo W. Upham, M.P.P.
Best pair white birds, W. J. Davis.
Best pair black birds, J. H. Copeland.
Best pair buff birds, A. Blackie.
Best pair colored birds, H. Kennedy.
Best pair Asiatic birds, H. Kennedy.

4 Silver Table Spoons by Jas. A. Gibson. Won by Kidney Bros.

1 subscription each to Poultry Advocate.
Best Barred Rock female, Hartland Poultry Yards.
Best White Rock female, W. J. Davis.
Best White Wyandotte female, H. Kennedy.
Best Buff Orpington female, Hartland Poultry Yards.
Best R. Island Red females, R. B. Hagerman.

1 year's subscription to Canadian Poultry Review to each.
Best Barred Rock male, R. B. Hagerman.
Best White Rock male, W. J Davis
Best White Wyandotte male R. B Hagerman.
Best Buff Orpington male, A Blackie.
Best R. Island Reds male, R. B. Hagerman.

Grading Up a Milk Herd.

This is the commendable undertaking of a young Nebraska dairyman, A. Righter Wood, who has started a family milk supply depot and plant near Omaha. The idea which this young man has conceived, and is now developing in actual breeding operation, is to select, from the common cow stock of the country, about fifty head of choice milkers, regardless of breed or previous condition of ownership. The standard of excellence will be based upon quantity and quality of milk, good constitution, soundness of body, even to the tuberculin test and a veterinarian's certificate of freeness from this dread disease. With this quality of cow, he purposes breeding up a high grade of Guernsey milkers, that will possess merit and desirability as family cows and commercial milk producers.

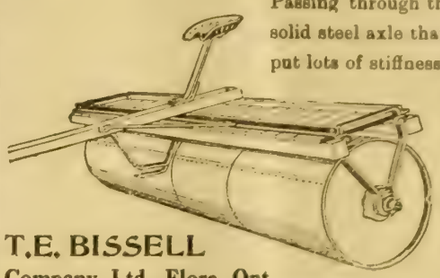
This is one of the feasible undertakings that is sure to win out, if persistently adhered to. The use of one of the highest standard milk bred Guernsey bulls, that could be found in America, and the use of the Babcock test, in analyzing the quality of the cow that is to pass muster in the make-up of this foundation cow stock, are the principles laid down in the premises of this enterprise.

The saving of all the likely appearing heifer calves, from this mating, and the developing of them into producers, and the breeding again of these into the same deep milking strain of Guernsey, is the detail in breeding that is now outlined and has been under prosecution for six months past. The same system of close testing and culling out will be carried on through each succeeding generation, until the very highest standard obtainable is reached in production.

This grading up enterprise is commenced with the very best backing be-

Buy the Strongest Roller
The "Bissell."

When you purchase the "Bissell" you get a land roller that packs the soil just the way you want it done. More than that, you get the strongest, sturdiest land roller made. We make the "Bissell" to withstand hard knocks. We fit the heavy steel drums with pressed steel heads. The seams are securely rivitted every two inches. We make these drums so strong that we guarantee them not to dent or dinge under the hardest work.

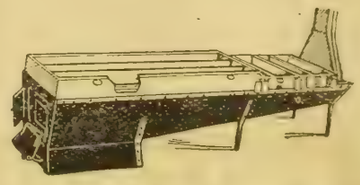


Passing through these drums is a heavy two inch solid steel axle that will never bend or break. We put lots of stiffness and rigidity into the well-braced frame. It has the strength to withstand all the hard strains you may place upon it. If you would like to know more about the "Bissell" write to Dept. M. for catalog or ask your local dealer to show you our different styles.

T.E. BISSELL Company, Ltd., Elora, Ont.

READY FOR USE
IN ANY QUANTITY
For making SOAP, softening water, removing old paint, disinfecting sinks, closets and drains and for many other purposes. A can equals 20 lbs. Sal Soda. Useful for five hundred purposes.
Sold Everywhere
E. W. Gillett Co., Ltd.
Toronto, Ont.
GILLETT'S
PERFUMED
LYE
MADE IN CANADA

MAKE MORE MONEY WITH YOUR MAPLE SYRUP



It is the **clear amber colored syrup** that brings the fancy prices.

It is the **clear amber colored syrup** that wins the blue ribbons at the big Fairs.

It is the **CHAMPION EVAPORATOR** that makes this **clear light** syrup. The **CHAMPION** will make this clear syrup **every time** if you boil the fresh sap shallow.

The **CHAMPION** catalog tells you of every improvement in Sugaring, and is just **full** of useful ideas to make more money out of your Maples.

We will gladly write you and also send this catalogue free, and will prove why the **CHAMPION** means **every dollar for you** that is in your Maples.

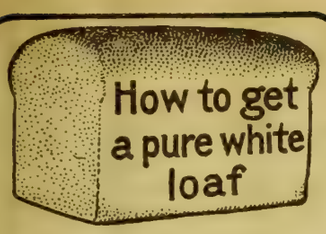
The Grimm Mfg. Co., 58 Wellington Street. MONTREAL.

Better Than Spanking

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309 Windsor, Ont., will send free to any mother her successful home treatment with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Chamberlain's Cough Remedy is not a common, every-day cough mixture. It is a meritorious remedy for all the troublesome and dangerous complications resulting from cold in the head, throat, chest or lungs. Sold by all dealers.

Have you a weak throat? If so, you cannot be too careful. You cannot begin treatment too early. Each cold makes you more liable to another and the last is always the harder to cure. If you will take Chamberlain's Cough Remedy at the outset you will be saved much trouble. Sold by all dealers.



THE object of all expert bakers and cooks is to make a pure white loaf

And this object is attained by the use of

PURITY FLOUR

Purity is a hard-wheat flour of decidedly superior whiteness. It bakes into a pure white loaf. So, you see, to get the really beautiful white loaf you must use PURITY hard-wheat flour.

"More Bread and better bread."

Western Canada Flour Mills Co., Ltd.
Mills at Winnipeg, Brandon, Goderich.

hind it. A good 160 acres of rich agricultural land, new, up-to-date farm and dairy improvements, even to the most minute detail of the business, every conceivable appliance, fixture and machine for handling the milk and preparing it in the most sanitary and healthful condition for the consumer, is in use.

The milking machine, the cement cow barn, the perfect system of ventilation, the absolute freedom from all unsanitary influences is a feature in connection with this cow improvement enterprise that makes it almost a guarantee that this is the beginning of a milk dairy cow improvement that is worth while for the public to follow as an example of where the profit in the milk cow business is found to the largest possible degree.

A Good Record.

Following is a record of a dairy herd, owned by Mr. Isaac Schofield, Hampton, Kings Co., N. B. :

Cream sent to factory, net returns	$310.64
For home use	30.00
27,893 pounds milk (skimmed, at 20 cents)	55.78
Two calves, one at $10 and one at $20	30.00
	$426.42
DR.	
Cottonseed meal and mill feed	$ 84.70
27,893 pounds milk to cows and calves	55.78
Hay and other farm feed	117.00
	$257.48
Net returns	$168.94
Net average per cow	42.23

J. H. GRISDALE.

Chamberlain's Cough Remedy is a very valuable medicine for throat and lung troubles, quickly relieves and cures painful breathing and a dangerously sounding cough which indicates congested lungs. Sold by all dealers.

PEOPLE use ML Floorglaze for the hulls of sailboats and motor-boats, and are satisfied with the way it looks and lasts.

That proves M L Floorglaze is water-proof. A good all-purpose finish, therefore.

PEOPLE use ML Floorglaze on vehicles, too, and find it looks better and lasts longer than any kind of varnish or paint.

That proves M L Floorglaze is fade-proof and weather-proof. The perfect protector for all woodwork, therefore.

PEOPLE find that ML Floorglaze helps housewives keep floors dust-free because the surface stays glass-hard and glossy.

M L Floorglaze doesn't mind wet, sun, scuff of feet nor dragging of furniture across it.

ML FLOORGLAZE is the best thing you can get to help renovate the whole house. Fine for all woodwork, indoors and out. Makes old furniture look new again. Goes farthest, too—gallon covers 500 square feet.

Choose among 17 pretty colors in solid enamel—seven Lacs to imitate hardwoods—and Transparent for natural finish. Comes in little and big tins. Easy to put it on right. Ask at your dealer's or write us for news of the hundred uses you could make of M L Floorglaze. The Imperial Varnish & Color Co., Limited, Toronto

Recommended and Sold by All Reliable Paint Dealers and Hardware Merchants

SPRAY FOR GAIN

This season see to it that your orchard is given a proper chance. To do this you must **spray.**

In selecting your spray materials take care to secure those upon which you can confidently depend for results.

The very best commercial sprays to-day are

Cooper's V1, V2 and V3 Fluids.

They are scientific realizations of perfect **Fungicides** and **Insecticides.**

They are endorsed and recommended by the **Dominion Fruit Inspector for Nova Scotia, G. H. Vroom, Esq.,** of Middleton.

They cost $2.50 per gallon anywhere and one gallon will make **100 gallons.**

Ask for your local dealer's name from

Wm. Cooper & Nephews,
Toronto, Ont.

N. B. Fruit Growers' in Session.

(Continued from page 275)

HON. D. V. LANDRY.

Just prior to adjournment, Dr. Landry entered the hall and in response to calls expressed his pleasure at the large number of gentlemen present, a fact which looked well for the increased interest that was being taken in fruit growing. For his own part, as head of the Department of Agriculture, he was prepared to do all in his power to assist them in their work, and he trusted that now that a specialist had been engaged to assist the fruit growers the province would be in the happy position of being able to supply its own people with all the fruit they needed without having to import from Ontario. What the province could do, as has been shown both in Great Britain, and at the Winter Fair at Amherst and he trusted that the farmers would take up the matter of fruit cultivation with a will.

The following is a list of the awards for the apples exhibited.

Femeuse—1, J. C. Gilman; 2, R. Shaw,

McIntosh Red—1, J. C. Gilman; 2, I. W. Stevenson; 3, S. B. Hatheway.

Ben Davis—1, R. Shaw; 2, S. W. Stevenson; 3, S. B. Hatheway.

Scotts Winter—1, I. W. Stevenson; 2, J. C. Gilman; 3, S. B. Hatheway.

Northern Spy—1. J. C. Gilman; 2, S. L. Peters; 3, W. Cecil Peters.

Gano—1, S. B. Hatheway; 2, I. W. Stevenson; 3, J. C. Gilman.

Tolman Sweet—1, J. C. Gilman; 2, R. W. Stevenson; 3, Henry Wilmot.

Golded Russet—1, J. C. Gilman; 2, R. Shaw; 3, S. L. Peters.

Bishops Pippin—1, J. C. Gilman; 2, R. Shaw; 3, J. R. Esty.

Grimes Golden—1, J. C. Gilman; 2, I. W. Stevenson.

Baxter—1, J. C. Gilman; 2, I. W. Stevenson.

Milding—1, J. C. Gilman.

King—1, S. L. Peters.

Northwestern Greening—1, Henry Wilmot.

Canada Baldwins—1, J. C. Gilman.

Wealthy—1, Henry Wilmot.

Wolfe River—1, I. W. Stevenson.

Alexander—1, J. C. Gilman.

Princess Louise—1, I. W. Stevenson.

Best Seedling—I, Henry Wilmot.

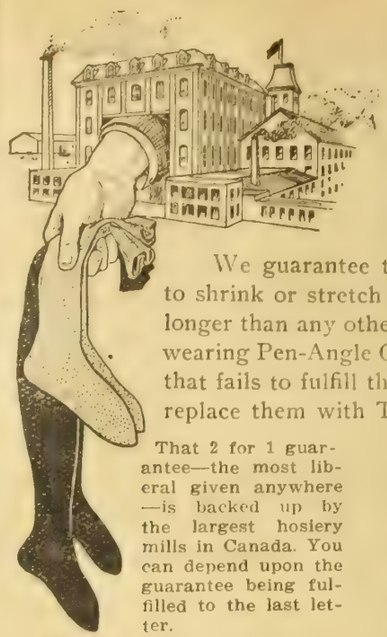
Collection of 10 varieties—1, J. C. Gilman.

Best packed box—1, J. C. Gilman; 2, W. H. Moore.

Training the Horse.

(Continued from page 276)

object comes at your eye, or you dodge when a missle comes at your head—done without time to think—so the horse shies, jumps, or kicks at imaginary foes when none exists. The reflex nerves are working to protect the animal and they do it without consulting the mind.



Buy Hosiery Made by the Largest Mills on a 2-for-1 Guarantee

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to wear longer than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs free of charge.

That 2 for 1 guarantee—the most liberal given anywhere—is backed up by the largest hosiery mills in Canada. You can depend upon the guarantee being fulfilled to the last letter.

Buying hosiery on this plan you make doubly sure of satisfaction, for if the hosiery does not fulfill the guarantee the makers have to pay a double penalty.

But after you've worn a pair of Pen-Angle Hosiery you'll understand why we give this 2 for 1 guarantee, for you will have discovered your ideal hosiery—form-knitted, seamless, longest-wearing.

The reason for Pen-Angle superiority is due to the exceptional quality of the cashmere and cotton yarns we use. And because we knit them on Penmans' exclusive machines. We have the sole rights to use these machines in Canada.

Seamless Hosiery

These machines form-knit the hosiery to fit the form of the leg, ankle and foot perfectly, without a single seam anywhere to irritate the feet or rip apart.

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

Don't be content another day with hosiery which has those horrid seams up the leg and across the foot—with hosiery less serviceable—but get Pen-Angle 2 for 1 guaranteed hosiery

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns. 2-ply leg. 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black, light and dark tan, champagne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, $1.00; 6 pairs, $1.50.

No. 1175.—Mercerized. Same colors as 1720. Box of 3 pairs, $1.00; 6 pairs, $2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

No. 330. — "Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, $1.00; 6 pairs, $2.00.

Instructions

If your dealer cannot supply you, state number, size and color of hosiery desired, and enclose price, and we will fill your order postpaid. If not sure of size of hosiery, send size of shoe worn. Remember, we will fill no order for less than one box and only one size in a box.

Catalog Free

If you want something different than the styles and shades listed, send for handsome free catalog which shows an extensive line in colors. 45

Penmans, Limited, Dept. 45 Paris, Canada

Pen-Angle Hosiery

WARRANTED HIGH PENMANS GRADE HOSIERY

A SEARCHING INVESTIGATION WILL PROVE SUPERIORITY OF

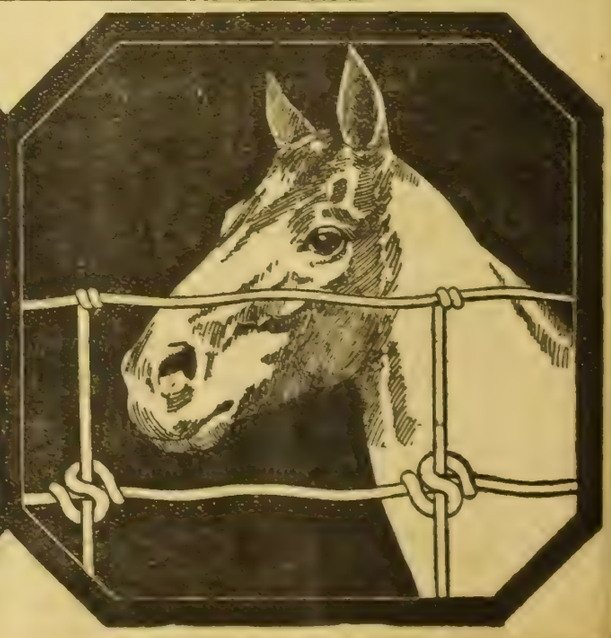
IDEAL WOVEN WIRE FENCE

Investigate IDEAL fence. Do like the railways. Test the laterals for elasticity—the uprights for stiffness. Test both for smoothnesss and heaviness of galvanizing. Test the lock for gripping-tenacity. Put a roll on the scales and weigh it. The more searching your investigation the greater the triumph of IDEAL fence. When finished, you will have indisputable evidence that IDEAL is the stiffest, strongest, heaviest, most rust-proof woven fence. If you are like the railways you will erect for permanency. That means an order for IDEAL fence. But first of all let us send you our free booklet, so you can see the different styles for hogs, cattle, etc.

HAVE WE AN AGENT IN YOUR LOCALITY?

If not, there is a splendid chance for someone to increase his income. IDEAL fence is an easy seller. Its weight, quality and strength are appreciated by every man who is looking for a permanent fence investment.

THE McGREGOR-BANWELL FENCE CO., LTD., WALKERVILLE, ONT.



So if you want to train a horse well do so by controlling the nerves. Use this law of reflexes to make the horse safe instead of dangerous. Smother out the foolish acts and put better ones in their place.

A word of command or assurance will do more to control a well trained horse than yanking or whipping. Let the horse know you have no fear of the street car or auto, of the shadow or stump. If you are afraid something will happen you may be sure the horse will share your fear.

More should be done to teach horses our language than to teach them signs. You may train a team to gee or haw, to go slow or stop by certain touches of the lines. But what if another driver does not know your signs. He tries the common word signs and fails to get control of the team.

One thing every horse should be taught, that is, to stop short at the word whoa. The safety of such a training is apparent. If anything goes wrong the team will stop, though frightened, when they hear the command whoa. The writer had his team trained to obey the word and not a pull on the lines. He threw the lines down and said whoa good and distinct. They stopped at once One time when shredding corn the wagon was full of ear corn and left at the crib alone. They got frightened and ran away. Down the hill and circling around they went pell mell with the big load pushing them on. The owner went to the hillside and called out whoa. They came to a halt as soon as they could stop the load. Not an ear was spilled, not a thing broken. It might have been very different had they not instinctively obeyed the command.

Use gentle and firm means of controling the horses without slashing around with whip or yanking on the lines so much. Speak only when you expect the order obeyed. Like children they soon learn to pay no heed to your commands if too freely given and too losely enforced.

Help for Weak Backs

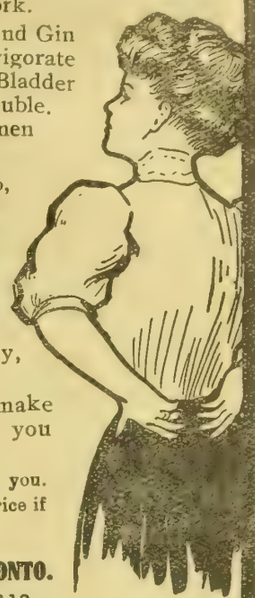
WOMEN WHO SUFFER

with Backache, or sharp, shooting pains through the hips and down the legs, should heed Nature's Warning. You have strained or weakened the Kidneys and they are calling on you for relief.

Probably you are delicate—you may be doing too much work—and yet you may not be in a position to give up doing your own cooking, washing and housework.

You can take Gin Pills, however. And Gin Pills will so heal and strengthen and invigorate the Kidneys, and soothe the irritated Bladder that there will be no sign of Kidney Trouble.

They have helped thousands of women—just as they helped Mrs. Dixon.



59 Hoskim Ave., West Toronto,
May 20th, 1909.

"After ten years of suffering from Kidney Disease, I believe I owe my life to Gin Pills. Before I began using Gin Pills, my back ached so much that I could not put on my own shoes, but after taking three boxes of Gin Pills, these troubles are all gone. It is a pleasure for me to add one more testimonial to the grand reputation of Gin Pills." MRS. MOLLIE DIXON.

We want to help you to be free of pain—to be an active, healthy, happy woman—just as much as you want to be well.

We know that Gin Pills will help you, take away the pain, and make your Kidneys well and strong. So sure are we of this that we will let you try Gin Pills and test them at our expense.

Just write us for a free sample. We will send it by return mail, without cost to you.

Gin Pills are sold by all dealers at 50c a box—6 for $2.50. Sent on receipt of price if your dealer does not have them.

Dept. M.F **The National Drug & Chemical Co., Limited,** **TORONTO.**
110

POTASH MEANS PROFIT.

Experiment on TURNIPS

By Alex. Anderson, Baddeck, C. B., N. S.

Plot I.	Plot II.	Plot III
Unfertilized	Complete Fertilizer	Fertilized Without Potash
882 bus.	1722 bus.	1320 bus.

(Increase due to POTASH is 402 bus.)

The Majority of the readers of the MARITIME FARMER are now quite familiar with the word POTASH and some have stopped to consider its meaning. The PROGRESSIVE farmers have thoroughly tested it and found that it means PROFIT. Are you a Progressive Farmer? Have you used POTASH? POTASH is an essential ingredient of all Complete Fertilizers. If you are to be a successful farmer, you cannot afford to remain ignorant of the uses of Commercial Fertilizers. POTASH promotes maturity and improves both the quality and the quantity of the produce.

POTASH in the highly concentrated forms of

Muriate of Potash & Sulphate of Potash

may be obtained from all leading fertilizer dealers and seedsmen.

Write us for FREE copies of our publications, which include:—

"Fertilizers, their Nature and Use"
"The Potato Crop in Canada"
"Records of Fertilizer Experiments"
"The Farmers Companion" etc.

Dominion Agricultural Offices of the Potash Syndicate,

1102-1105 TEMPLE BLDG, TORONTO, ONTARIO.

Fruit Growers

DO you want other fruit growers to tell you how

NICO SOAP

AND

PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS., Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

Maple Syrup and Sugar Making.

(Continued from page 269)

it is exposed to the air the darker it will be.

There is always a demand for a good article. The sugar season comes when when there is no other work demanding attention and the returns prove a good investment.

AMOS H. HANNAH,
Lakelands, N. S.

SUGAR MAKING NOT DESTROYING FORESTS.

I have been making maple sugar for ten years and tap about 1300 trees. I use a 7-16 bit for boring the holes and use No. 2 Grimm sap spouts. I gather with a horse and sled. Take into a tank house that is situated on a side hill higher up than the evaporator house. We strain the sap in the tank house and we also have a metal strainer in the feed tank. I use a Grimm arch and evaporator size 2 1-2 by 14, which well easily evaporate the sap from 2000 trees. The sap enters it at one end and comes out as syrup weighing about 13 pounds per gallon at the other end. I use a thermometer when making syrup so it is always of the same consistency. The syrup is strained through a white felt strainer which makes it very pure. I have kept 30 gallons of syrup in a tank for three days without showing any signs of settlings. When making sugar I use the old fashioned pot but I believe a sugaring arch would be much better. I test the sugar or wax with a snowball. I have taken $150.00 out of my grove of 1300 trees in 17 days. I use eight quart cans on the trees. I have found that nearly all beginners make the mistake of being doubtful re the advisability of buying a complete outfit. They need not hesitate to make the investment as the rig will pay for itself in one year if properly handled. Maple products bring in a nice lot of money at a season of the year when farmers cannot do much else. When a man is making sugar he is not performing the destructive practice of cutting away his lumber reserves. The trees will always be there to turn in useful dollars in future years.—WILLIAM COLBURN, Collingwood Corner, N. S.

FROM SAP TO SUGAR.

Maple sugar making is one of the most profitable undertakings on a farm that has a nice grove of maples.

In this locality the sugar season generally opens about the 20th of March. In tapping trees, the first operation is to bore a hole in each tree with a one-half inch auger and brace, such as is usually used by carpenters. The holes are made about three or four feet from the ground and of varying depths, according to the size of the trees. We usually bore about two inches deep in the larger trees. One man usually does the boring and is followed by another, who drives the spouts and hangs the cans on the trees by means of the wire hook on each spout. Either prior to or following this operation, the sap house and boiling room are put in order.

Sap does not run from the spouts in a steady stream, as many, who are not acquainted with the operation, suppose. The fastest I ever saw sap run was at the rate of one hundred and twenty drops per minute. The average run during the season would be in the vicinity of one drop per second. At the rate of one hundred and twenty drops per minute, it takes about three hours to fill a six quart can. When the cans are about half full, we commence to gather. From 1,000 trees we get about five thousand quarts of sap, which, when boiled, makes about thirty gallons of syrup or three hundred pounds of candy or about two hundred and fifty pounds of sugar.

For hauling the sap to the camp, we use a horse and sled, on which a large cask is fastened. The men carry large five gallon pails, into which they empty the smaller cans, and when the pails are full, they are emptied into the cask, which is drawn to the sap house as soon as it is filled, where it is emptied into a large tank, made for the purpose by the Grimm Manufacturing Co., of Montreal.

For boiling we use a Champion evaporator, which is made by the same company. For a grove of 1,000 trees, sugar makers usually requre a 3x12 foot evaporator which has three pans that cover the entire surface of the arch shaped store or firebox. The sap is run into

Cheap twine is not good economy

WE want every farmer in this country who uses our twines to go through the entire harvest season without one break in the field. We have set out to make that the standard test of all twines, and we believe that I H C twine comes nearer being such a grade than any other twine.

We have taken this matter the more seriously because we have stood back of the Sisal and Standard Sisal twines and the better grades of Manila ever since twine was made.

85 to 90 per cent of all the twine used is Sisal. It comes in a larger strand than the Manila twine; and as all binders are adjusted to use this twine, the result has been that the bigger, stronger twine has proved more satisfactory in actual mechanical binding. Its only equal is the higher grade, higher priced Manila, which also bears the I H C trade-mark.

These two twines represent the highest point of excellence thus far attained in binder twine. You get the best when you ask your dealer for an

I H C Brand of Sisal—Standard Sisal—Manila or Pure Manila

You get a twine that has made its record in millions of wheat fields.

One that is guaranteed of standard length and standard strength.

One that is smooth-running; that works at a steady tension, without kinking or tangling in the twine box, and consequently without any loss.

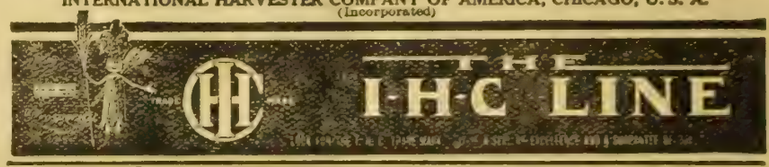
One that has the smallest percentage of breaks and that works well in the binder knotter. Good binder twine is as important to you during harvest as good weather. You cannot regulate the weather, but you can pick your twine. If you want to be positive that you will have no twine delays, choose your twine—Sisal 500-ft.; Standard (which is made from pure Sisal) 500-ft.; Manila 600-ft., or Pure Manila 650-ft.—from any of the following I H C brands:

Deering McCormick International

These brands mean time-insurance for you during harvest.

Let your local dealer know well in advance what your needs will be. The mills are working now. And if you want more interesting facts on binder twine, write the International Harvester Company of America, at nearest branch house for particulars.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.
INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(Incorporated)



SAVE MONEY.

Buy direct from the producer and save the middlemen's profit. We are large growers of Celery, Cabbage, Beets, Carrots, Parsnips etc. We ship to all the Maritime Provinces and have supplied critical buyers in Montreal and Toronto with our celery and other vegetables. They say our celery down by the sea has a flavor not to be had elsewhere.

J. J. GAY & SON,
Charlottetown - P. E. I

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING, ARGYLE ST.,
Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application TELEPHONE 1005

Take Your Pick of The Two Best

Fences Made

Whether you want a Machine-made or a Field-built Fence, you cannot find equals to the Frost.

We'll send you a free booklet, describing in detail the Frost Woven and the Frost Field-built Fences.

We have figured out the real reason why so many Wire Fences in Canada rust about 12 or 15 years sooner than they should.

And we have also figured out the only method of Wire-making to overcome this vital weakness.

So we now Make and Galvanize our own Wire. No other exclusive Fence Maker in Canada does that.

Two-thirds of the life of a Wire Fence depends upon its Galvanizing. Yet in the very face of this, nearly every Fence made in Canada is Galvanized too thinly.

One reason is because Zinc costs four times more than wire.

The other reason is that if most Fence were Galvanized thicker, that Galvanizing would peel off.

Because heavy Galvanizing here cannot adpermanently to greasy, scaly Wire. That scale is certain to chip off, and with it goes Mr. Galvanizing.

The Frost Fence is double Galvanized—not merely "coated." But it will not peel off. Because Frost Galvanizing is a part of the Wire itself.

You see, Frost Wire goes through three thorough "Cleansing" processes before it ever goes near a Galvanizing Furnace.

This positively removes every bit of grease and scale, and leaves the surface clean.

This double Galvanizing will endure the severest Canadian weather changes. It will fight off rust for 25 or 30 years.

The Frost Fence can be safely stretched tighter than any other Fence we know of.

Because Frost Wire is Annealed to the proper degree of temper. This makes it more elastic, and stronger, than any Fence in Canada.

But because the "Frost" degree of temper is a secret, no other Wire in Canada is tempered to withstand Canadian conditions.

That's why the Frost Fence is the strongest. We are anxious to prove this.

We are anxious to send you our free booklet on Fence, together with samples of the Frost Fence and Locks post paid.

This booklet tells all about Fence, and shows you how to buy the right kind for Canadian purposes. It's worth a lot of money to you. Send for it to-day.

The Frost Wire Fence Co.,
Limited.
Hamilton, Ontario.

"Frost" Fence

Agents Wanted

21

OUR BOOKS FREE

Get our FREE Books and Get More Profit from Your Farm

The Business Farmer doesn't sell out and buy new lands. He makes his old lands new by fertilizing.

Get our Free Books which go into the whole subject of Nitrate of Soda fertilizing and show how little it costs to get larger crops and more profits.

Nitrate of Soda

is an investment that's bound to pay. Thousands have proved it. So can you.

HAY - Nitrate of Soda, used 100 lbs. to the acre has increased the yield of barn-cured Hay 1000 lbs.

CORN—Nitrate of Soda, used 100 lbs to the acre, will increase the yield of corn 280 pounds of grain.

ALFALFA—Nitrate of Soda is also highly successful in starting Alfalfa right.

Special directions and books on the crops you are interested in—free of charge and postpaid.

Send a post card for your book or books Today

Dr. Wm. S. Myers, *Director Nitrate Propaganda*
John St. and 71 Nassau St., New York

RUSH'S U-BAR STEEL STANCHIONS

are swinging stanchions. See the comfort and freedom they give cattle. Are strongly made to stand roughest usage, and save lumber and labor in fitting up cow stables. Saves time in trying cattle, because the latch is easily operated and absolutely secure. Made in five sizes. Write for catalogue and prices.

A. M. RUSH,
King St.,
Preston, Ontario.

The busiest and mightiest little thing that ever was made is Chamberlain's Stomach and Liver Tablets. They do the work whenever you require their aid. These tablets change weakness into strength, listlessness into energy, gloominess into joyousness Their action is so gentle one don't realize they have taken a purgative. Sold by all dealers.

the evaporator to the depth of about three-quarters of an inch. This depth is regulated by an automatic feeder which connects the supply tank with the front of the evaporator. As the sap boils it gradually works from one pan to another by a syphon system, until it reaches the back pan whre it reaches the syrup stage and from which it is drawn off and strained through a piece of felt or fine woolen cloth into a large pot with a capacity of thirty or more gallons. When the pot contains about twelve gallons it is hung over a fire and boiled for from thirty minutes to one hour to make it into candy or sugar. By dipping a snowball into the boiling liquid one soon learns to know when it has the proper consistency for good candy. The candy is then poured on the snow and it soon assumes a proper degree of hardness.

When sugar is wanted the boiling syrup is kept constantly stirred and when it reaches the proper stage it is poured into monlds and when cool it is ready for use.

ALONSO WILSON,
Stilesville, N. B.

PIONEER USERS OF EVAPORATORS.

The primitive method of tapping trees for sap was by cutting an oblique gash in the trunk of the tree, and under this gash another horizontal cut was made into which a wooden wedge was driven which conducted the dripping sap into the receptacles which were placed on the ground or on the snow. The sap was gathered to some central place where it was boiled in pots over an open fire. The pots were refilled as the sap evaporated. This process was continued until the whole was reeuced to a syrup. The principal equipment in those days was the iron pot which did slow but good service until the introduction of the Bellow's Falls Evaporator.

I bought th first evaporator that came to Nova Scotia and sugar makers from far and near came to see it. This make of evaporator was then generally used until the introduction of the Grimm evaporator which is superior in every respect.

According to our present practice we do not tap our trees until after the 20th of March. We bore holes with a 7-16 bit and use Grimms sprouts and 6, 8 or 10 quart cans which are hung on the spouts. For covers we took blocks to

(Continued on page 296)

Here's a fence that is strong and springy—remains taut and will not rust—

Peerless the Fence that saves expense

Put a Peerless fence around your farm and you'll get real service.

It will last through years of the hardest kind of use.

It will not rust—and rust is the greatest enemy of wire fencing.

It will not sag—when struck by a wagon or unruly animal it springs right back into position.

Our No. 9 Peerless fence is made of heavy English galvanized wire—all No. 9 gauge.

We tested all kinds of wire and found this English wire the best of all. No other wire we have tested is drawn and galvanized with such care and thoroughness.

For this reason Peerless Fence will not rust—the spelter never chips off. The fence will last for years.

You can test and know how good any fence is before you buy it. Write for our simple formula for testing wire. We'll also send samples of Peerless Fence to test.

We know there is no fence made that will last as long and give you as much satisfaction as the Peerless Fence. Write to-day for our simple test and samples.

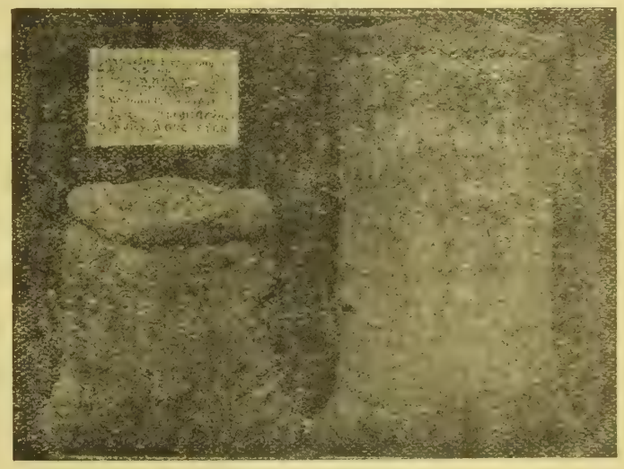
THE BANWELL HOXIE WIRE FENCE CO., Limited
Makers of Farm, Poultry and Ornamental Fence and Gates
Dept. K, Hamilton, Ont., Winnipeg, Man.

Iron Duke Overalls

When do men almost swear ?
When they get into a pair of overalls that look big, but grip them like a vise when they bend over.
National and Iron Duke Overalls are so well proportioned and large where needed, they are a comfort to work in.
If your merchant does not handle them ask him to order a pair for you.
Our guarantee---Return if not satisfactory.

The Maritime Hat and Cap Co.,
Manufacturers, TRURO, N. S.

No. 1 Thomas' Phosphate Powder.



Yield Per Acre	Wheat	Straw
WITH Thomas' Phosphate Powder	23 cwt., 44 lbs.	57 cwt., 4 lbs.
WITHOUT Thomas' Phosphate Powder	12 cwt., 64 lbs.	29 cwt., 14 lbs
INCREASE	10 cwt., 80 lbs.	27 cwt., 60 lbs.

Always insist upon getting the genuine No. 1 Thomas' Phosphate Powder and see that every bag has our Number, Brand and Tag. If you have any doubt as to the quality of the goods, insist upon your dealer giving you a certificate in writing that you are getting the genuine Thomas' Phosphate Powder. If not, write to us and we will supply you direct.

Special English [Odourless] Potato Phosphate
High Grade English Fertilizers
Acid Phosphate, Potash, Nitrate of Soda

Write for circulars and pamphlets.

The Anglo Canadian Chemical Co.,
SAINT JOHN, N. B.

FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N B

CORRESPONDENT asks whether an Easter Lily, that has three buds, about two inches long, could be brought to perfection by Easter Sunday. If so, what treatment would be required?

ANS.—I should say that an Easter Lily, now with buds two inches long, should be in bloom by the first of April, if kept in a warm, sunny place. You will probably have to keep them back. You can place it in the cellar for at least a week before Easter, without injury to the flowers, but keep well watered. One sure thing is, that with good treatment, a Lily will bloom just six weeks from the time the bud shows its form.

A ST. J. CORRESPONDENT writes: I have a Renet Geranium that I got in December, when a small slip. It has grown well until lately. Now it seems to be fading and the leaves turn yellow. What had I better do to save it? It is in a small pot, a little larger than a tea cup.

ANS.—The plant evidently wants repotting, badly. Do so, using a pot two sizes larger than the one in which it is now in. Water freely and give a sunny window. This is the season of growth of these plants and they will shortly bud and bloom profusely. Nothing is nicer for a house plant, for the next three months, than a Pelargenium or Renet Geranium. Some people say that they are troubled with lice on them, but it is no more trouble to keep them clean than any other plant. They should be kept in as small a pot as they can, without injury to the foliage.

A HARTLAND CORRESPONDENT writes: How shall I treat a Turk's Head Cactus to make it bloom? Are the thorns on it poisonous? Will a Century plant bloom oftener than a hundred years? What makes the leaves fall off a flowering Maple and how would you cut off a slip from it to make it grow and when?

ANS.—I should keep the Turk's Head Cactus dry and cool during the winter and thoroughly pot bound. About the first of April bring to sunlight and heat and give it plenty of water. It should bloom in July or August, if it is going to bloom this year. I have found them very uncertain plants, as regards bloom. I could not say as regards the poisonous character of the thorns, but this quality is ascribed to many varieties of Cacti. Century plants bloom in their native land at different ages and plants, under cultivation in tubs, have bloomed at the age of twenty years. I could not say where the trouble would be with the flowering Maple, without further information, as regards size, age and previous treatment. A new shoot, with three or four leaves, would be apt to root at this season of the year, but from the time it is placed in the earth, until rooted, it should never be allowed to become dry.

Dutch Hyacinths should be well rooted now and the early varieties ready to be brought to the light. Give them plenty of water, and if bleached from their dark quarters, do not give sunshine for a few days, until they have regained their green appearance. A moderate temperature gives better foliage and bloom than a high one and you will not be troubled with a weak flower stalk, necessitating tying up.

Help for Those Who Have Stomach Trouble.

After doctoring for about twelve years for a bad stomach trouble, and spending nearly five hundred dollars for medicine and doctors' fees, I purchased my wife one box of Chamberlain's Stomach and Liver Tablets, which did her so much good that she continued to use them and they have done her more good than all of the medicine I bought before—SAMUEL BOYER, Folsom, Iowa. This medicine is for sale by all dealers. Sample free.

REQUESTS FOR THE

Authentic STYLE BOOK

The first appearance of our beautiful new **Spring and Summer Catalogue** is bringing an avalanche of requests upon us. Had it appeared earlier it would not have been authoritative with regard to styles. It will show you the approved wearing apparel for 1910, as well as all the new novelties just brought back from Europe by our army of buyers. Your address on a post-card will bring it to you free of charge.

THE ROBERT SIMPSON COMPANY LIMITED

TORONTO

A Woman Who Sees This Washer

will want it right away. The "Puritan" takes all the work out of wash day—in fact, it does away with wash-day because a big family wash can be done in an hour. Improved roller gear and other exclusive features mean quick, easy washing.

Churning made easy with the "Favorite" Churn—a national favorite.

If your dealer does not handle these two labor-saving devices, write us. 68

DAVID MAXWELL & SONS, - ST. MARY'S, Ont.

THE FOX STANDARD SCALES

For **ACCURACY** and **STRENGTH** ther have no equal

Ask your Dealer or write

GEO. M. FOX,

Scale Manufacturer, LONDON, ONT.

For Spraying

Fruit Trees, Shrubs, Bushes and Plants, there's nothing to equal

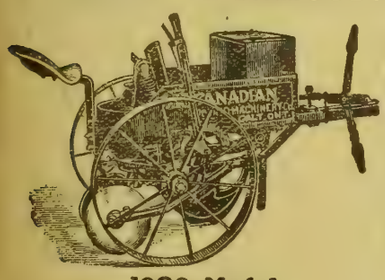
EUREKA

COMPRESSED AIR, FOUNTAIN SPRAYER

Requires but one pumping to empty entire contents of tank. Automatic lever valve stops flow of liquid while going from one plant to another. Easy, light, compact; tested to stand 5 times the pressure required to expel liquid. Two nozzles, with hose attachment for spraying small trees. Write for catalogue.

THE EUREKA PLANTER CO. Limited, - Woodstock, Ont.

Potato Planter.



1909 Model.

With or without fertilizer attachment, opens the trench, drops the seed, covers it, and marks for the next row, all in one operation. Does not bruise or mar the seed in any way. One man and team can plant from 4 to 6 acres per day. Write for Catalogue.

Canadian Potato Machinery Co., Ltd.,

121 Stone Road, - Galt, Ontario.

The N. B. Farmers' and Dairymen's Convention

(Continued from page 286.)

day. Mr. Hatheway's farm, near Fredericton, which was carrying cattle to full extent of its feeding capabilities, was an object lesson to the province. A farmer, who kept cows, pigs, etc., was independent of the potato market, because he could feed his surplus to his live stock and secure a profit that way.

C. F. Alward said the prosperity of Ontario was due to its live stock. Instead of buying fertilizers, he would buy feed and keep more live stock. Ninty per cent. of the potatoes used in Toronto were imported from Ontario, but lack of proper seed selection and rotation of crops was responsible for the deterioration in potato quality and should be remedied.

ON WEDNESDAY MORNING.

at the Arctic Rink, Dr. Standish of the Nova Scotia Agrtculture College gave an interesting lecture on "The Horse". He explained the various points by referring to the horses in the ring and farmers should study to acquaint themselves with the most common ailiments and characteristies of their most valuable asset in farming operationst—he horse.

"With all due respect to the inventors," said the doctor, "the horse as a motor power is never likely to be superceded."

"In the west, where the traction engine might be supposed to have found its best field of usefulness, horses were in greater demand than ever before. Even in Ontario the price of horses has increased $65 per head during the last year alone.

"The farmers could not adopt a more profitable industry than horse raising. No product yielded such large returns, or was so easy upon the soil. The food required for the horse exhausted the fertility of the soil less than that of any animal except the sheep.

The doctor declared that these provinces needed to give more attention to the breeding of draft horses, and horses adopted to agricultural purposes. In this age farming with slower motor agencies like oxen was not effective. The farmer needs better motor power—a problem that can be solved by finding and developing a type of horse useful for the advancement of agriculture.

The possibilities of horse farming were large. In all communities where horse raising was a recognized industry, property abounded to a greater extent than any other farming communities. Draft horses could be sold for $500 and upward in the west.

In judging the points of a horse, continued the doctor, it was necessary to regard the animal as a motor mechanism. There was a common opinion that the best type of draft horses was low set and heavy, but the fact was a good draft horse should have weight as well as thickness, because strength or traction power depended upon the length and thickness of the muscles. The horse with the shape of a bull dog, which was usually considered a desirable characteristic, was not the right

HAVE YOU READ IT ?

THE SPECIAL ARTICLE OF THE EDITOR entitled "FARM ACCOUNTS" which appeared on page 206 of February 8th issue of this journal? If you have read it YOU will be looking for US. If you haven't go to your paper rack, get down this particular copy, turn to page 206 and READ IT. It is excellent advise, but are you prepared to carry it out? If you are all well and good but if you are not then you NEED US.

WE TEACH YOU RIGHT AT YOUR HOME IN YOUR SPARE HOURS how to **KEEP BOOKS**—Our course in **ACCOUNTS** includes Bookkeeping, Arithmetic, Rapid Figuring, Business Letter Writing, Banking, Writing, Spelling. It is exactly suited to the NEEDS OF THE FARMER.

It is just as important that the farmer keep books as the merchant. If you do not wish to learn yourself have one of the boys or girls LEARN HOW.

REMEMBER—We give you a regular bnsiness college training right at home for less than half the cost.

Fill in your name and address below, cut out this ad and mail to us to-day and get our booklet telling all about it.

Name.....

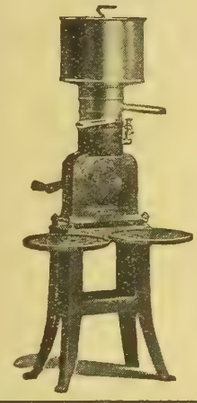
Address.....

THE SHAW CORRESPONDENCE SCHOOL,

393 to 405 Yonge Street, - - - TORONTO, CANADA.

THE DOMO SEPARATOR

The Cheapest and the Best



Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties.
For particulars of Free trial offer write to

J. de L. Tache,

General Canadian Agent, St. Hyacinthe Que.

Agents Wanted all over the Maritime Provinces

ONLY ONE QUALITY — THE VERY BEST

STEELE · BRIGGS SEEDS

TESTED FOR GERMINATION — TESTED FOR PURITY

SOLD BY LEADING MERCHANTS EVERYWHERE.

type. A bull dog was physically constituted to pull back and not to draw ahead. The efficient horse has a good volume of shoulder arching over its fore-legs, which should be straight and not too far apart.

Strong fore-shoulders were not enough; in order to have good drawing power the horse must have strong hind-quarters and a good sized body. Consolation of parts was the main thing; abnormal or disproportionate developments of any part might be considered a sign that the horse had been abused in some way and was past its usefulness.

He declared that a trained eye could tell a horse by merely looking at him. A horses head always gives a fair indication of its character; the shape and action of the ears, being depended upon the condition of its nervous energy, and tells the trained horseman a great many things.

ON WEDNESDAY AFTERNOON.

Mr. Good, manager of the Dominion Exhibion, addressed the meeting and urged every one present to put their best foot forward and educate the outside world by helping to make the exhibition a successful demonstration of Canada in general and of of New Brunswick in particular.

OFFICERS FOR ENSUING YEAR.

President, S. B. Hatheway, Fredericton; Vice-President, Walter Stevens, Charlotte Co.; Corresponding Secretary, Geo. E Fisher, Chatham, N. B.; Recording Secretary, Bliss M. Fawcett, Sackville; Treasurer, H. H. Smith, Blissville, Sunbury Co.

County Vice-Presidents. York, Wm. H. Moore, Scotch Lake; Sunbury, Henry Wilmot, Oromocto; Queens, Isaac Baird, Chapman; Kings, Charles Peters, Elmhurst; St. John, Alex. F. Johnson, Upper Loch Lomond; Albert, C. S. Bishop, Hillsboro; Westmorland, Fred. C. George, Sackville; Kent, William Cail, Weldford; Gloucester, John Moody, Bathurst Village; Northumberland, William A. Baldwin, Chatham; Charlotte, J. R. Oastler, St. Andrews; Madawaska, B. R. Violette; Victoria, S. B. Wright, Long Settlement; Restigouche, Hon. Chas. LaBillois, Dalhousie.

RESOLUTIONS.

Whereas it has been clearly proven and substantiated by facts and figures, that the average production of Dairy stock as kept on the farms of this Province at the present time, shows no profitable return to the farmer, for the feed consumed and labor expended, and Whereas:—It is almost absolutely necessary that every farmer must keep some Dairy cattle, in order to keep up the fertility of the soil on his farm, and,

* * *

Whereas:—The market price has already reached about as high an average for this class of product as he can hope for, and as competition will allow, and yet cannot reach a profit production, on account of the individuals and the extreme high cost of feed and labor,

* * *

Therefore Resolved:—That it is the opinion of this meeting that the only remedy lies in the increasing of the production of the individual without the same corresponding increase in cost to produce.

(Continued next issue.)

Wear Ruthstein's STEEL SHOES

Absolute Protection Against
Colds Rheumatism, Stiffness, Discomfort
No More Blistered, Aching Feet
GOOD-BYE to CORNS and BUNIONS!

Pat'd Dec. 4 1906 Others pending

FREE

Write for book, "The Sole of Steel," or order a pair of Steel Shoes on blank

Off With the Old Rough, Wrinkled Leathers! On with the Comfortable STEEL SHOES!

There's more good wear in one pair of steel Shoes than in three to six pairs of the best All Leather Shoes. And **comfort!** The very first time you slip your feet into Steel Shoes they feel fine. They need no "breaking in." And the longer you wear **Steel Shoes** the better you like them, for they keep your feet warm, dry and comfortable—though you work in mud or slush up to your shoe tops. Steel Shoes are shaped to fit the foot, and the rigid steel bottoms and sides force them to keep their shape. No warping, no twisting, no leaking possible. **They are as light as any ordinary work shoe.**

How Our 1910 Model Steel Shoes Are Made. The Wonderful Steel Bottoms.

Steel Shoes solve the problem of the Perfect Work Shoe for all time to come.

The **soles** of Steel Shoes and an inch above the soles are stamped out of a special light, thin, **rust-resisting steel**. One piece of seamless steel from toe to heel. As a further protection from wear, and a means of giving a firm foothold, the bottoms are studded with adjustable steel rivets.

The adjustable steel rivets of the 1910 model Steel Shoes add the finishing touch of perfection. Practically all the wear comes on these steel rivets. When steel rivets wear down you can instantly replace them with new rivets. And the rivets at the tip of toe and ball of foot are the only ones that **wear**. Steel Shoes never go to the Repair Shop, for there's nothing to wear but the rivets. And the Steel Shoes **shed Mud** almost as easily as they **shed water**. The cost is only 30 cents for 50 extra steel rivets. No other repairs are ever needed.

The uppers are made of the very best quality of pliable waterproof leather, and firmly **riveted to soles**. There is greater strength and longer service and more foot comfort in Steel Shoes than in any other working shoes in existence. It's in the **steel** and the pliable **leather,** and the way that they are **put together**.

Throw Away Rubber Boots, Felt Boots and "Arctics!"

Rubber or felt boots heat the feet and make them sweaty and tender. Nothing more uncomfortable or more harmful to the feet. One pair of Steel Shoes will outlast at least three pairs of felt or rubber boots.

A man who wears Steel Shoes doesn't have to own three different styles of working shoes. No arctics or felt boots necessary.

Secret of Steel Shoe Elasticity

Steel Shoes have thick, springy Hair Cushion Insoles, which are easily removable for cleansing and airing. They absorb perspiration and foot odurs—absorb the jar and shock when you walk on hard or stony ground. They fleep your feet free from callouses, blisters and soreness.

Steel Shoes Save Doctor Bills

Wear Steel Shoes and you need not suffer from Colds, Rheumatism, Neuralgia, Lumbago Stiffness of the Joints and other troubles and discomforts caused by cold, wet feet. Keep your feet always warm, dry and comfortable in Steel Shoes. They protect your health and save doctor bills, while adding to your comfort.

Low Prices on Steel Shoes

Sizes. 5 to 12. 9 inches, 12 inches and 16 inches high.

Steel Shoes, 6 inches high, $2.50 a pair · better grade of leather, $3.00 a pair · extra grade of leather, black or tan color, $3.50 a pair.

Steel Shoes, 9 inches high, $4 a pair · extra grade of leather black or tan color, $5 a pair

Steel Shoes, 12 inches high, $5.00 a pair; extra grade of leather black or tan color, $6 a pair.

Steel Shoes, 16 inches high, $6 a pair; extra grade of leather, black or tan color, $7 a pair.

One Pair Will Outwear 3 to 6 Pairs of Leather Shoes

The comfort of Steel Shoes is remaakable. Their economy is simply astounding! Practically all the wear comes on the rivets in the **bottoms,** and the rivets can be replaced very easily. Don't sweat your feet in rubber boots or torture them in rough hard, twisted, shapeless leather shoes. Order a pair of Steel Shoes today. Sizes 5 to 12.

Order Steel Shoes Today!

We strongly recommend the 6-inch high, at $3.50 a pair, or 9 inches, at $5, as they give best satisfaction for general service.

In ordering, **state size shoe you wear.** Enclose $3.50 a pair for 6 inch high, and the best and most comfortable working shoes you ever wore will promptly be shipped to you. Your money refunded if Steel Shoes are not exactly as represented when you see them. Send today!

H. M. Ruthstein, Sec'y and Treas.

Steel Shoe Co., Dept. 405 Toronto, Canada

Main Office and Factory: Racine, Wis., U. S. A.
Great Britain Factory: Northampton, England.

Order Blank for Steel Shoes

Steel Shoe Co., Dept. 405 Toronto, Can.
Gentlemen:
I enclose..... for $ .....
in payment for..... pair Steel Shoes.
Size.....
Name .....
Town..... Province.....
County.....
Dealer's Name.....

It Won't Rub Off

VISIT the finest hotels, the costliest homes, and you will find Alabastined walls. Alabastine is used in these palatial places, not because it is the most expensive wall decoration, but because it is the most artistic and effective. An Alabastined wall is a delight to the eye—so soft, velvety and beautiful. It will not rub off or fade. Alabastine is cement, and hardens with age. Its beauty is permanent. It is the most sanitary and inexpensive wall coating known. Alabastined walls are now the general vogue, in cottage and mansion alike. Wall Paper is out of fashion. The sales of Alabastine in Canada *have doubled in two years.*

CHURCH'S COLD WATER Alabastine

None Genuine without Little Church on Label

FREE STENCILS

To still furthur popularize Alabastine and again double its sales, we have organized a Decorative Department, and are prepared to offer FREE COLOR SCHEMES and FREE STENCILS to users of Alabastine. Write today for particulars. Our advice is *free.* Let us help you to beautify your home at a moderate cost.

Please send free particulars of your Color Scheme and Free Stencil offer to

Cut out, fill in and mail

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City.....Prov.....

The Alabastine Co., Ltd., 37 Willow St., Paris, Ont.

PROPERTY FOR SALE.

Property of 60 acres, new modern house, good barn and poultry buildings, frontage of 1,700 ft. on Main street, and ¾ mile from centre of Town of Sussex. It is beautifully situated and a most desirable country place and suitable for general farming fruit and poultry raising, &c. Terms and further description on application.

G. S. KINNEAR, - Sussex, N. B.

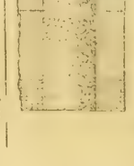
CATTLE FATTEN QUICKER --take on weight faster---make better beef --- when dehorned. Cows give more milk---and half the danger in shipping by rail or boat is eliminated.

KEYSTONE DEHORNER does the work in 2 minutes. Cuts from 4 sides at once. Write for free booklet.

9

R. H. McKENNA
219 Robert St. Toronto, Ont. Late of Picton, Ont.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B



Build Concrete Silos

Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements.

London Concrete Machinery Co., Ltd., 19 Marmora Street, London, - - - - Ontario.

Largest Manufacturers of Concrete Machinery in Canada.

MARKETS.

St. John Market.

GRAINS—Oats, 50c.

LIVE STOCK—Milch cows, $30.00 to $50.00.

DRESSED MEATS.—Beef (carcass), 5½c to 8½c; beef (retail), 10c to 22c; mutton, 6c to 7c; veal; 8c to 11c; lamb, 8c to 10c; pork, 11c to 11½c.

PORK. 11c to 11½c.

DAIRY PRODUCTS.—Creamery butter, 25c to 27c; dairy butter, 20c to 24c; cheese, 11c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c to 22c; fowl, 75c to $1.50; chickens, 75c to $1 75; turkeys, 20c to 25c.

VEGETABLES.—Carrots, $1.50; potatoes, $1.20 to $1.40; turnips, 60c to 75c; beets, $1.50.

MISCELLANEOUS.—Hay, $12.00 to $15 00; beef hides, 10½c; calf skins, 16c; sheep skins, 80c to $1.00.

Charlottetown Market.

LIVE STOCK.—Butchers' cattle, 4c to 7c; sheep, 3½c to 4¾c.

DRESSED MEATS.—Beef (carcass), 6c to 7c, ordinary quality; pork, 10c to 11c.

HORSES.—All depends on quality.

DAIRY PRODUCTS—Creamery butter, solids, 24½c; prints, 25c to 26c; dairy butter, 18c to 21c.

POULTRY AND POULTRY PRODUCTS—Eggs, 22c to 23c; fowl, 10c per pound; chickens, 10c to 12c

VEGETABLES.—Potatoes, 30c to 40c; turnips, 18c to 20c.

MISCELLANEOUS.—Hay, $10.00 to $11.00; straw, $5 00 to $6 00; beef hides, 10c; calf skins, 12c to 14c; sheep skins, 75c to $1 00.

MARKET REVIEW AND FORECAST.

GRAINS.—Oats is about the only grain grown here for sale. There's a little wheat sold in some sections but mostly for seeding. This will bring about $1.25 per bushel. Oats are slightly lower, as shippers seem to think that there is not likely to be much money made on them at prices that have been paid lately. We quote to-day, black, 43c; white; 41c and 42c.

Feed stuffs are almost all imported and sold on retail basis, and the same applies to seeds. There is no fruit on the market now, except imported stock, with the exception of a few apples, and as these are in small quantities and each farmer makes his own prices, it is impossible to quote a price that would be of any use.

The local demand for potatoes has been fairly well supplied, and as there is no demand for shipping, it is simply a question of what the farmer can get for them when he brings in a load, and while a limited quantity can be sold each week to the retail stores, a few hundred bushels extra would glut the market and prices would be much lower; but at present there is only a very limited supply of all kinds of farm produce.

Hay is offering in fair supply and shippers are paying from $10 00 to $11 00 p r ton for pressed stock of good quality. There is considerable demand for hay for export at present and there is some going forward by almost every trip of the boats.

Dressed meats, with exception of pork, are about as last reported. Pork is now selling at 11c per pound and supplies not sufficient for the demand.

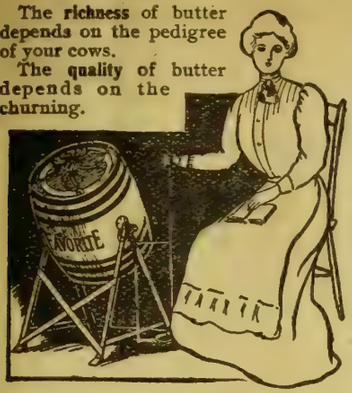
Dealers in horses report good demand and prospects of high prices this spring. Quite a few are changing hands and some fairly large shipments have crossed to the mainland.

If you have pure bred stock of any ind, for sale, it will pay you to advertise in these columns.

BETTER PRICES FOR YOUR BUTTER

The richness of butter depends on the pedigree of your cows.

The quality of butter depends on the churning.



The "FAVORITE" CHURN means a deliciously smooth butter that will bring the "top" price. And the "FAVORITE" will get every particle of butter fat out of the cream. Hand lever and foot tread—8 sizes.

"Puritan" Washer washes a tubful of clothes in five minutes.

Write us if your dealer does not handle the "FAVORITE" CHURN and "PURITAN" WASHING MACHINE. 71

DAVID MAXWELL & SONS. - ST. MARY'S, ONT.

Practical Butter Maker

with capital enough to install a small plant in a building built for the purpose at Hampton, Kings Co., N. B., within 22 miles of St. John, could hear something of interest to him by corresponding with

E. A. SCHOFIELD,
Hampton N. B.

St. John Poultry Show.

The last poultry show of the season in the Maritime Provinces was held in St. John February 23rd, 24th and 25th. The show on the whole was an improvement over last years show. For a city like St. John that contains a lot of fanciers of poultry the exhibit was a disappointment. Sussex and Moncton carried off the honors in most all classes. Mr. Geo. Robertson of Ottawa, placed the awards and his work was all that could be desired for fair, impartial and painstaking work. Mr. Robertson always makes friends wherever he goes. He has a genial smile that never fades away.

The location of the show, the cramped quarters and the piling up of tier on tier of coops of all kinds of construction very much handicaped the show.

One exhibit of Brown P. Rocks was worthy of mention. In classes where there was competition and quality the Leghorn easily took the lead, both brown and white. Black Minorcas was popular too, some nice reds came out and looked good. Wyandotte class had some good stuff in white, golden and silver, Orpingtons, small class in Buff and wtite, Bantams and Pigeons fair. A lone pair of ducks represented the great water fowl, and one pair of turkeys were all that faced the judge.

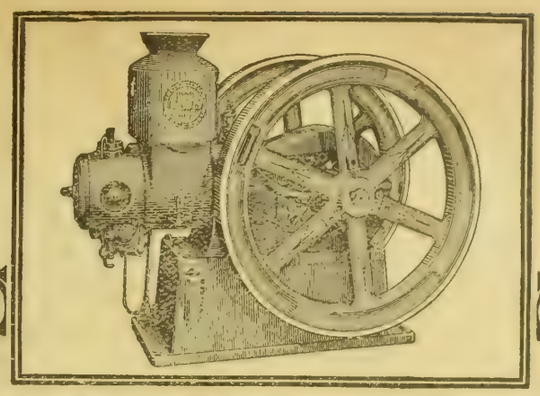
Mr. Bee-Keeper

You can save time, worry and money by ordering your Bee Supplies from us.

Bees, Hives, Sections and Foundations at lowest prices, also Small Fruit Plants.

Price lists free.

E. L. Colpitts,
Box 10, - Petitcodiac, N. B



Olds Engines

Send for our new catalogue.

YOU can learn engine facts you really should know before deciding on your gasoline engine.

The catalogue proves why it is good judgment to own an Olds engine and be sure you have the most practical, most economical, most durable rather than to get a cheap engine and take chances on losing all it costs you.

Besides the highest quality of workmanship and material the Olds Engine has many special and exclusive features. Each one means a great deal to you.

1. Removable water jacket—may save you $100 00.
2. Seager Patent Mixer has not a moving part to wear or get out of order.
3. No gasoline pump of any kind to leak or be primed.
4. Cylinders and Pistons of special metal—ground to exact size.
5. Cylinder and head one piece—water cannot enter cylinder.
6. Safety Governor—positively prevents engine's running away.
7. Absolute guarantee—NO REPAIR BILLS for the FIRST YEAR.

Tell me what you need an engine for and I will assist in selecting the proper size. Write the nearest office.

Branch Offices
R. W. HART, Mgr.,
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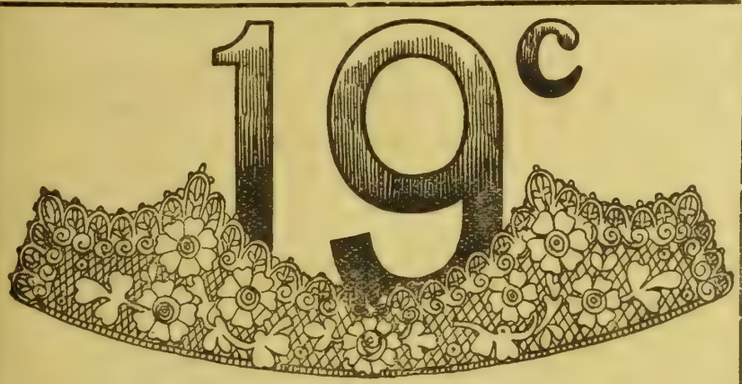
J. B. SEAGER, Gen'l Mgr.
Seager Engine Works,
LACHINE - - MICH.



This Fine Guipure Lace Collar Prepaid to Your Address For Only 19 Cents.

SEND us this ad., together with the price 19c, and we will send you this beautiful Guipure Lace Collar, PREPAID, by return mail. The length is 14 inches, and the heighth is 4½ inches on the sides, and 2¼ inches in front and back. White, Cream or Black, as preferred. EXTRA SPECIAL, price **19c**

Ask for a Copy of the New

PAQUET CATALOGUE

for Spring and Summer 1910. This catalogue is overflowing with values like this Lace Collar Offer. Pages 72 to 77 illustrating more than ONE HUNDRED well-known articles in GROCERIES at Extra Special Prices. Pages 22 and 23 show the latest creations in Millinery for Spring. Pages 1 to 4 show the newest styles in Ladies' Suits. In fact every one of the 104 pages of this catalogue will interest you and save you money. Write NOW! A postcard will do—you'll get the catalogue by return mail.

THE PAQUET COMPANY LIMITED.

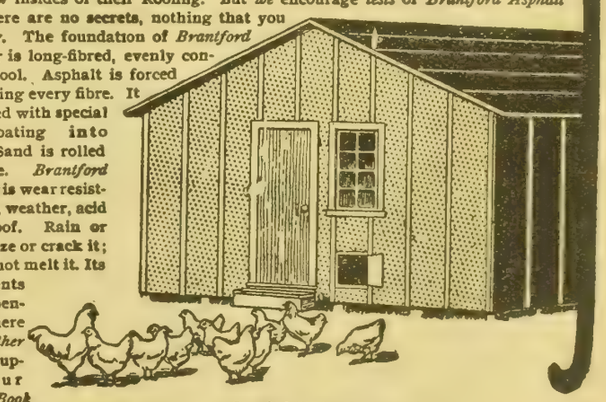
Mail Order Dept.

QUEBEC, - - CANADA.

HOW THE VERY LIFE IS EATEN OUT OF MOST ROOFING.

Not two Roofings in a hundred can withstand the slow, secret, dangerous attacks of acid—a deadly enemy to most Roofing. Because few Roofing makers care to spend the extra money necessary to make such Roofing. Acids are caused by green or damp hay, or the cattle in your sheds. These cattle sweat, producing vapor which contains acids and gases destructive to most Roofing. These enemies attack the underside—which is weak in most Roofing—and does its ruinous work where you cannot see it, till too late. The first you know that it is not what the fellow claimed is the startling sight of a million "pin-holes" all over. Examine the Roofing of your barn *now*—you'll likely find this defect. This is caused by weak insides, which *should* be the strongest part, but the portion hopelessly slighted by most makers because *you* won't test it. Nearly all Roofing, except *Brantford*, has as a foundation wood pulp, jute, cotton cloth, etc., which cannot absorb sufficiently. It possesses nothing to hold it together, and is coated with cheapest covering obtainable: animal fats, greases, oils, tar, or some other refuse. These dangerous coatings are so weak that they are readily at the mercy of the acids. And the foundation! It has no barrier! It has already wilted. No amount of supposedly preventatives can save this Roofing. It is bound to go to pieces sooner or later and just when you least expect. Most Roofing makers will try to avoid the issue if asked to show insides of their Roofing. But *we* encourage *tests* of *Brantford Asphalt Roofing*. There are no secrets, nothing that you shouldn't know. The foundation of *Brantford Asphalt Roofing* is long-fibred, evenly condensed pure wool. Asphalt is forced into wool, soaking every fibre. It is heavily coated with special waterproof coating into which Silicia Sand is rolled under pressure. *Brantford Asphalt Roofing* is wear resisting, fire, water, weather, acid and smoke-proof. Rain or snow can't freeze or crack it; heat of sun cannot melt it. Its pliability prevents cracking or opening at seams. There are many *other Brantford* superiorities. Our Big *Roofing Book* with *Brantford* samples is *free*. Write us or your dealer *now*.

Brantford Roofing



Brantford Roofing Co., Limited, Brantford, Canada.

When writing advertisers please mention the FARMER.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J McLEAN & SONS, Hopewell, N. S.

JERSEY BULL FOR SALE (3) years old. Write for particulars. CUNNINGHAM BROS., Bayhead N. S

FOR SALE.—Shorthorn bulls from, 5 to 17 months.—ISAAC CHIPMAN & SON, Chipman Corner. N. S.

GUERNSEYS FOR SALE.—New milch cow, 4 years old; bull calf, 2 months old.—L. G. KELLEY, Berwick, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt. nt

WANTED.—Shorthorn bull, not under 15 months.—JAMES A. THOMSON, Durham, N. S.

FOR SALE.—Strawberry Raspberry and Blackberry plants; hardy stock; best varieties; lowest prices. Special price on collections by mail Catalogue free. Also Bees and Bee-Keepers' Supplies.—E. L. COLPITTS, Box 10, Petitcodiac, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

WANTED by middle of March or sooner, a smart, trusty man for general farm work Must be steady and agreeable. Will hire for eight or nine months. Will pay good wages to such a man. H. B. SCHOFIELD, Lakeville, N.S.

CANADIAN POULTRY REVIEW 48 to 72 pages monthly. Bright, practical, fully illustrated. Every department in charge of a specialists. 34th year of publication. 50c a year, 3 years one dollar, anywhere in Canada, outside Toronto. Address Toronto, Ont.

CHESTER WHITE PIGS FOR SALE.—Notice I am booking orders for young Chester White pigs for March and April delivery, also one aged boar. My Chester Whites have taken nearly every prize in their class at Amherst for three years. Order quick and get the best.—LEONARD COURT, Donaldson P. E. I.

BEEKEEPERES—Advertiser contemplating emigration to Nova Scotia to practice fruit culture or fruit and dairying would be grateful to any beekeeper in province writing him respecting honey yield and any other details of interest to brother beekeeper, BRADFIELD, 31 NORTHLAND DRIVE, SCOTSTOUN, Glasgow Scotland.

CREAM SEPARATOR FOR SALE.—One No. 2 American Cream Separator, good as new, close skimmer, 400 pounds capacity. As we are installing a power machine, we will sell this separator cheap and on easy terms. Write for particulars to SEPARATOR, care of MARITIME FARMER, Sussex, N. B.

WANTED.—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W A. JENKINS' MFG., CO., London, Ont.

Gold River Farm Poultry Yards.

Eggs for Hatching from

Houdans,
Silver Grey Dorkings,
R. C. Rhode Island Reds.

Our yards contain birds of show quality and high individual merit.
Book your orders early.

W. J. M. MacLEOD,
"Gold River Farm."
LOCH LOMOND, WEST, N. S.

Incubators For Sale.

The Hartland Poultry Yards are selling incubators and brooders. You will want one of these machines, if you are going to hatch chickens this season. Send for catalogue, it is free.

HARTLAND POULTRY YARDS,
Harrtland, N. B.

Shorthorns For Sale.

One pure bred bull 8 months old. one pure bred heifer 8 months old, one pure bred heifer 2½ years oldt one pure bred cow 4 years old. The first two are sired by Emma's Fashion. The last two are in calf by Emma's Fashion. Apply to

CHAS. B TAIT,
Oxford, N. S.

Jersey Bull For Sale.

I have for sale one nice two year old Jersey bull. He is a grandson of Hood Farm Pogis 9th. Correspondence solicited.

ROBERT ROBINSON,
Sussex N. B.

Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.
Correspondence solicited.

WM. ERB, - Sussex, N. B.

Succeed vs. Success.

The difference between success and failure may be in the Incubator and Brooder you will use this year. I would write you if I knew you wanted a machine. Special prices for cash. Credit if you want it and are O. K. Your name please.

J. B. DAGGETT,
Tracey Mills, Car. Co., N. B.

FOR SALE.

Ayrshire bull fit for service Four Ayrshire bull calves, Ayrshire females any age. Thirty-five head to choose from Intending purchasers met at railway depot. Book orders for Chester White swine. Long distance phone in residence. J. FRANK ROACH,
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PURE BRED POULTRY
BARRED PLYMOUTH ROCKS
WHITE ORPINGTONS

We have the finest strains in North America. Stock and Eggs in season.

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The Simplest

Gasoline Engine?

Look at the cut

The 'Stickney'

is known from the Atlantic to the Pacific because it is the farmers favorite. **So Simple.**

No Pipes and Separate Tank always in the way.

Strong and Heavy—Means hard work.

Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

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Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

LOGAN BROTHERS, - - Amherst Point, N. S.

BELLEVUE STOCK FARM.

Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.

Wish-Ton-Wish Stock Farm.

HOLSTEIN CATTLE,

We are offering two young bulls from six weeks to two months, and one fit for service by late summer or early fall.

HARDING BROS., Props.,
Welsford, Queens Co., N. B.

Do you want a bull from a high testing dam? The great grand dam of the bull we are offering was the noted Sadie Vale Concordia and the eight nearest related females of his sire had an average record of twenty-seven pounds butter in seven days. This bull was sweepstakes bull calf at the Fredericton Exhibition in 1907

C. H. Giles, "Brooklands" Fredericton, N. B.
'Phone 2200-41 P. O Box 119

Opportunity for Breeders

Of the Maritime Provinces to secure breeding stock from the best herds, studs and flocks of Great Britain and the Continent of Europe by direct importation, without expense of special trip and at minimum cost.

An importer and dealer of many years experience is prepared to fill orders for all classes of stock, subject to inspection on arrival by officials of the Provincial Departments of Agriculture, delivery upon conclusion of inspection and quarintine. No inflated prices but turn over made as low as quality of stock will permit. Horses, Cattle, Sheep or Swine bought as orders may be received. Reference from prominent stockmen and officers of the British War Office may be seen at the Department of Agriculture, Fredericton. Correspondence solicited. Address

A. H. THOMSON,
Care Dept. of Agriculture, Fredericton, N. B.

COVENHOVEN STOCK FARM.

St. Andrews, N. B.

French Canadian and Dutch Belted cattle. Clydesdale Stallion, rising three years old. Tamworth Breeding sows. Write or visit us.

J. R. OASTLER, Supt.

SHORTHORN BULLS FOR SALE.

I have, for immediate sale, eight very nice Durham Bulls, from two to fifteen months old. They were sired by a bull imported from Hon. John Dryden & Sons and are out of excellent cows. Write us your needs. We can supply them and will give you good satisfaction

C. C. H. EATON, - Canard, Kings Co., N. S.

KINNEAR POULTRY COMPANY.

We are ready to quote lowest prices on new Model Incubators and Brooders. We also have some second hand Machines, guaranteed in first class order, on which we are quoting a low figure.

Our specialties in eggs for hatching are B. P. Rocks, R. I. Reds and White Pekin Ducks.

SUSSEX, - N. B.

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwich, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N.B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

R. J. Messenger, Bridgetown, N. S.
John A. Hughes, Petitcodiac, N. B
The S. H White Co, Ltd., Forest Glen, N. B.
Hon. W. Owens. 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex N. B
Syd. J. Goodliffe, Sussex, N. B.
Fred. S Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son, Chipman's Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N.S.

Oxford Down

Fred. S. Black, Amherst, N. S.

Cotswolds.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.

SWINE—Berkshire.

Howard W. Corning, Cheggogin, Yarmouth Co. N. S.

Yorkshires.

The S. H. White Co. Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yar. Co., N. S.
S. J. Goodliffe, Sussex, N. B.
Boyd A. Wetmore, Harvey, Albert Co. N. B.

Chester Whites.

W H. Moore, Scotch Lake, N. B.
Howard W. Corning, Coeggogin, Yarmouth Co., N. S
W. C. McLeod & Sons, Loch Lomond West, N. S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.
S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns.
W J.M McLeod, Loch Lomond, West N. S, Houdans and Silver Grey Dorkings and R. C. R. I. Reds.
Manning K Ellis, S. C. Buff Orpingtons, Barred Plymouth Rock.
Barred Plymouth Rocks, S. C. Brown Leghorns, R. I. Reds, J. C. H Benson, Sussex, N. B.

Gold River Farm.

CHESTER WHITES!

We are booking orders for Purebred, Registered Chester White Pigs, 6 weeks old, for spring delivery.

Do you want one? If so, book your order early and we will give you satisfaction,

W. C. MacLEOD & SONS,
"Gold River Farm," Loch Lomond West, Richmond Co., N. S

Springvale Farm.

Ayrshire Cattle and Oxford Down Sheep, Young Rams, also a few breeding ewes of different ages can be spared.

FRED S. BLACK,
Springvale Farm, Amherst, N. S.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone, Sussex, N B.

Utility and Show Cockerels.

We have many grand breeding Cockerels, from new strains, to go at once. Good breeding birds from **$1.00** to **$2.00** each, best of blood.

Exhibition show birds that will score from 91 points to 94 points each, **$2.00** to **$5.00** each. For high-class "stuff" this is the best value in Canada.

Barred and White Rocks, White and Buff Wyandottes, Rhode Island Reds, Brown and White Leghorns. A few Pullets of each breed to spare. Address:

SETH JONES,
Box 39, - - SUSSEX, N. B.

Eggs for Hatching

From the Great **Layers—Rose and Single Comb Black Minorcas.** At the recent Amherst fair with 8 birds entered we won **6 First Prizes** a **Second** and a **Third.** The heads of each of our pens are first prize Boston and Pittsburg Cocks as well as some of our females. Write for Mating list.

25 FOR $7.50 Baby Chicks and Lullaby Brooder

We save you the hatching.
Choice of 6 Breeds.

We have a full stock of Poultry foods.
Purina Baby Chick Food,
Fresh Ground Alfalfa Meal,
Kingsdale Improved Leg Bands.
Write for Circular and Prices.

Delivery Guaranteed. Incubators and Brooders and all supplies.

KINGSDALE FARM COMPANY, SUSSEX, New Brunswick.

Milking Shorthorns!

I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

Bliss M. Fawcett,
Sackville, - - N. B.

Barred P. Rocks.

Our claim to be the foremost breeders of this variety in Eastern Canada has been established by ten years of the keenest competition in the show ring with this class of birds. Our latest triumph at the Amherst Fair, winning, for the second time, the silver trophy for the best cock, hen, cockerel and pullet, of any variety, and the specials for the best shaped and the best colored bird of this kind, seals the fact. First cockerel, first pullet, first hen and second cock at Amherst means quality now. First cockerel, first hen, first pen and second cock at Halifax, all in one year, endorses it. Stock and eggs for sale. Satisfied patrons our aim.

CRAIG BROS., - Amherst, N. S.

Farmers, Attention!

We have in stock at present and for sale a few Ayrshire and Guernsey Fresh Milk Cows, young—also some Heifers of both breeds, from one month to two years old. We have likewise decided to dispose of our flock of Shropshire Ewes, Rams and Lambs. All the above are first class stock and registered in the highest registration in their respective classes. Prices right. Call on us or write. Would be pleased to meet prospective buyers, either at Bloomfield Farm or at the coming local exhibition—Colchester and East Hants—or the Provincial Exhibition.

John McDonald & Son,
Bloomfield Farm, - Shubenacadie, N. S.

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

FOR SALE!

Rose Comb R. I. Red Cockerels and Pullets. Columbian Wyandotte Cockerels and Pullets. Can furnish trios of both breeds, not related. Write for prices.

W. H. Henry, Shubenacadie, Nova Scotia.

Spring Brook Farm Ayrshires.

This herd won 1st, 2nd, 3rd in the aged cow class at the Maritime Winter Fair Dairy Test Amherst, 1909, 2nd, 3rd, 4th in the three-year-olds, also 2nd, 3rd, 4th, in 2-year-olds. We have some bull calves to offer, also females all ages.

McIntyre Bros., Sussex, N. B.

FOR SALE.

Three Pullets, 1 Cockerel, 1 Cock, 1 Hen, S. S. Hamburgs; $5.00 takes the lot. Good stock.

Hatching Eggs, White Rock, S. C. R. I. Reds, $2.00 per 15.

Mating list ready now. A card brings one.

Model (Cyphers), Incubators and Brooders at cut prices

THE BURLEY POULTRY COMPANY,
46 Princess Street,
St. John, - - N. B.

If you have pure bred stock of any kind, for sale, it will pay you to advertise in these columns.

PURCHASERS
—OF—
Holstein-Friesian Cattle

Take notice that for the purpose of facilitating the sale of Cattle by correspondence, where buyer and seller are widely separated, the buyer may make application to the secretary of the association for the inspection of the animals selected by him, the application to be accompanied by a fee of $5.00 for the first animal and $1.00 for each additional animal to be inspected in the same herd, and by the letters received from the seller, and on receipt of such application the secretary shall send an official to inspect the animal or animals, before shipment, to ascertain if they have been fairly described.

G. W. Clemons, St. George, Ont.
Secretary Holstein-Friesian Association.

HEAVY TEAM HARNESS AT ROCK BOTTOM PRICES.

Gentlemen, it will soon be time to look to your Harnesses or parts of Harness or you will want a new Collar that will fit your horse and not sore his shoulders. Why not drop me a card and I will be only too glad to quote you prices? We also carry a full line of all kinds of Harness and Horse Goods that are up to date.

Wanted—Two or three tons of good Rye Straw in small or large lots.

EDGAR AYER, Wholesale Manufacturer, SACKVILLE, N. B.

MAPLE FOREST STOCK FARM.

AYRSHIRE CATTLE AND YORKSHIRE SWINE.

ADDRESS:

S. J. GOODLIFFE, - Sussex, N. B.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Meadow Brook STOCK FARM

CHATHAM, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires

Importers and Breeders of Pure Bred Clydesdales, Hackneys and Shorthorns.

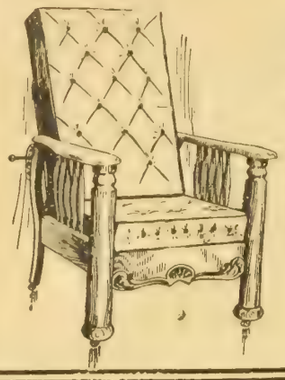
We invite your inspection of Stock

John Bennet, Supt. J. B. SNOWBALL & CO., Ltd., Props

Do You Need Furniture?

And Would You Like to Save From 15 to 25 Per Cent Off the Cost?

WRITE at once for our large illustrated **catalogue No. 8** showing 500 photographic pictures of the newest and best furniture on the market. Sent free to any address. Here are two examples of the big values in it:—



$8.50 for this Handsome Morris Chair

A sturdy, well-designed morris chair at a very moderate price. Frames are made of selected quarter-cut oak, highly polished and neatly carved; back is adjustable to four positions with brass adjusting rod. Two large reversible cushions with best velour coverings in choice of red, green or brown colors. Splendid valued this.

This Fine, Large, Comfortable Rocker, only $5.45

The frame of this rocker is selected oak with quarter-cut arms and carved front posts, all hand polished. Seat and back upholstered in best imitation leather with ruffled border, spring seat and buttoned back. Easily worth $10.00.

$5.45

THE ADAMS FURNITURE CO., Limited,

Canada's Largest Home Furnishers. TORONTO, ONT.

Prize Winners at the New Brunswick Provincial Seed Fair.

That it is unnecessary for New Brunswick farmers to go beyond the confines of their own province for seed grain was aptly demonstrated by the very creditable display that was made at Fredericton on February 23rd. Mr. S. J. Moore, Maritime Seed Inspector placed the awards. Those who take particular pains in cleaning their grain and growing only the best, find ready sale for their surplus stock at high prices, while those who do not give seed growing any special consideration find they must buy from their more up-to-date neighbors or send away to parties from whom they can get no guarantee that the grain will not contain impurities of an abnoxious character.

Following is a list of the awards:

WHEAT, WHITE FIFE—1, H. B. Parlee; 2. Donald Innes; 3, H. Gordon; 4, Robert Smith; 5, S, B. Hatheway.

WHEAT, RED FIFE—1, Donnald Innes; 2, George E. Fisher; 3, W. H. Moore; 4, John Stennick; 5, Henry Wilmot.

WHEAT, ANY OTHER VARIETY—1, W. E. Palmer; 2, Geo. E. Fisher; 3, W. McMurray.

OATS, BANNER—1, T. E. Goggin; 2, Donald Innes; 3, W. E. Palmer; 4, T. Hamilton; 5, Ed. Emmerson.

OATS, STORM KING—1, W. E. Palmer; 2, Geo. E. Fisher, 3, Robert Shaw; 4, Ed. Emerson, 5, N. F. Phillips

OATS, WHITE, ANY VARIETY—1, Donald Innes; 2, Geo. E. Fisher; 3, A. R. Snowball, 4, H. B. Parlee, 5; N. F. Phillips.

OATS, BLACK—1, H. B. Parlee.

BARLEY, TWO ROWED—1, H. B. Parlee; 2, D. Innes.

BARLEY, SIX ROWED—1, Donald Innes; 2, Robert Shaw 3, T. Hamilton.

BUCKWHEAT, SMOOTH—1, H. B. Parlee.

BUCKWHEAT ROUGH—1, Donald Innes; 2, H. B. Parlee, 3, T. Hamilton; 4, W. E. Palmer, 5, Robert Shaw.

FIELD PEAS, MARROWFAT—1, H. P. Parlee; 2, Donald Innes; 3, H. Gordon; 4, W. E. Palmer.

PEAS, ANY VARIETY—1, H. Gordon; 2, Donald Innes; 3, T. Hamilton; 4, W. E. Palmer.

BEANS, WHITE—1, Robert Smith.

BEANS, COLORED—1, Donald Innes; 2, Henry Wilmot.

CORN, ANY VARIETY, FLINT—1, Jas. W. Smith.

POTATOES, BEAUTY OF HEBRON—1, H. Gordon, EARLY ROSE 1, W. E. Palmer, 2, H. B. Parlee; 3, Jas. W. Smith, EARLY PURITAN—1, H. Gordon. IRISH COBBLER—1, H. B. Parlee. ANY OTHER VARIETY—1, H. B. Parlee; 2, Henry Wilmot; 3, C. H. Giles. CARMAN—1, H. D. Buchanan; 2, H. B. Parlee; 3, H. Gordon. GREEN MOUNTAINS—1, H. B. Parlee; 2, W. E. Palmer; 3, W. H. Moore; 4, J. P. Harding; 5, Jas. W. Smith. GOLDEN COIN—1, W. E. Palmer; 2, John Ferguson; 3, Lorne Hamilton, ANY OTHER LATE VARIETY, WHITE—1, W. E. Palmer; 2. Jas. Harding, 3, H. Gordon; 4, H. B. Parlee; 5, C. H. Giles, ANY OTHER VARIETY, RED—1, Jas. W Smith. DARK SKINNED—1, H. B. Parlee.

Maple Syrup and Sugar Makers.

(Continued from page 269)

the shingle mill and got them sawed into thin shingles. We then nailed cleats across the thick edge of the shingles which rests against the inside of the outer edge of the cans. The thin end of the shingle rests against the tree and in this way we have made for our cans covers at a trifling cost, that are almost ideal, compared with metal covers.

This mode of tapping is the best we know and is more generally followed than any other system. The sap is gathered with a horse and sled. The gathering tub is larger at the bottom than at the top and has a hinged cover. The tub may be tipped over and its contents spilled into the storage tanks.

We have an evaparator 16 feet long and 5 feet wide set on a portable furnace. The evaporator is in four sections two of which are 6 feet long. The other two sections are each two feet in length. The boiling sap passes from one compartment to another through syphons until it arrives in the last one from which it is drawn as syrup. Syphons are fitted with 1-2 cups at the bottom which does not allow any sediment to pass through with the exception of a substance which is a part of the product

HELP FOR WEAK, BROKEN DOWN MEN AND WOMEN

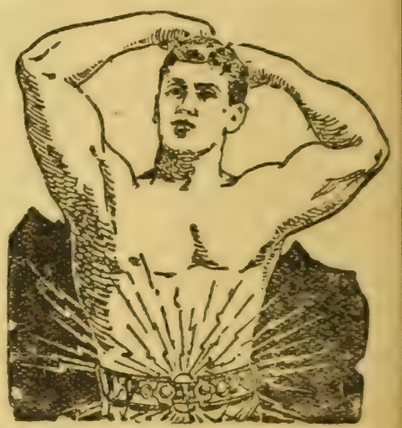
Worry--Worry--Worry! It's Not Work But Worry That Kills!

It's true that hard work has laid many a man on the shelf, but for every man who has been put out of commission by hard work hundreds have been sent to the scrap heap through some sort of dissipation or excesses.

Disease also has played its part in making the thousands of nervous and physical wrecks we encounter every day.

Never mind the cause; it's the condition that confronts us.

Give me a man who has lost his health and vigor through any cause, who lacks the strength and energy of a Manly Man, and I can restore his vitality, build up his strength and vigor, and give him back the energy and ambition of Youth! My Electric Belt is a Natural remedy, a time-tried remedy!



Its powerful current enters the body through cushioned electrodes, without shock, sting or burn, and, properly arranged for each case, its wonderful force is sent direct to any weakened organ, any weakened part of the system.

For hours at a time—in the daytime—in the evening, or, better still, during the night while you sleep, my Belt saturates your body with its wondrous vitalizing power.

I can prove to you that my Belt does all I claim for it. Is not the word of honest men and women who freely sent me their testimony good evidence?

Dear Sir, — I have used your Belt since last November, and I feel much better. The emissions have stopped entirely. I am well pleased with the Belt. It has proved all you claimed it to be.

DANIEL CHATTERTON,
Cobalt, Ont.

Dear Sir, — I have worn your Belt for a month now, and I am glad to say that I have received the greatest benefits from t. My back is a great deal stronger, and the pain in my legs and arms have gone and I am feeling like a new man already. You may use this letter in any way you wish. Wishing you every success, I remain,

WILLIAM McCONNELL,
Bon Accord, Vic. Co., N.B.

Dear Sir, — Since wearing your Belt, now three months, I am very pleased to tell you that my health has greatly improved. My back seldom hurts me now. I have gained flesh and look brighter and healthier than I have been for a very long time; and I can also sleep—oh, so well. For five years I can honestly say that I never knew what it was to have a proper night's rest, not until I wore your Belt, and I am confident that it can only be the Belt. To all persons suffering from Insomnia I most strongly recommend it—such a boon as it is. With my grateful thanks to you.

IDA E. MILLER,
King Edward Hotel, Elk Lake, Ont.

To those who are tired of paying without results, and to those who doubt if anything will help them, I make this offer. If you will secure me my

PAY WHEN YOU ARE CURED

I will let you have my Belt without paying me one cent in advance.

My Belt is the true cure for Indigestion (Dyspepsia), Constipation, Headache, Drowsiness, Rheumatism, Neuralgia, Lumbago, Sciatica, Weakness of the Back, Weakness of the Nervous System, Sleeplessness (Insomnia). It restores lost vitality. It corrects every sign of mental impairment and physical breakdown in men and women.

FREE BOOK

Call at my office and let me explain my Belt to you. If you can't do this, cut out this coupon, send me your name and address to-day, and I'll mail you, closely sealed, my elegantly illustrated 80-page book, which is FREE. My FREE BOOK for women is now ready. All men and women who are interested in recovering their health should read these books, for they point the way to Health and Happiness.

M. McLAUGHLIN,
214 St. James St., Montreal, Can.

Gentlemen: Please send me, prepaid, your Free Book.

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Office Hours—9 a.m. to 6 p.m. Wed. and Sat. until 8.30 p.m.

but which can be eliminated when the syrup is strained. The sugaring-off process is conducted in a large pot outside the house. My son makes a large quantity of maple cream which finds a ready sale.

Before we bought our Grimm evaporator it was nothing uncommon for us to work nights and days for a week or more in order to get over a big run but now we do very little night work. We have started a fire at one o'clock p. m. and finished a run of 900 gallons before bed time. There is a lot of work in connection with maple sugar making but there is a certain glamour about it that is pleasing and one does not mind the hard work.

E. Edwin Atkinson & Son,
Maccan, N. S.

EWING'S

—the Seeds You Can Depend Upon

What's the use of having good land—of fertilizing it—of working it well—if you sow poor, old, half-dead seeds?

The best seeds—Ewing's—cost less than the land, the fertilizer or the work—but your crop depends on them. Saving cents on seeds means throwing away dollars in crops, for you cannot get good crops from inferior seeds.

Ewing's Seeds are strong—healthy—clean—reliable. They are not only sure to grow, but sure to grow good crops, if you give them a chance and weather conditions permit.

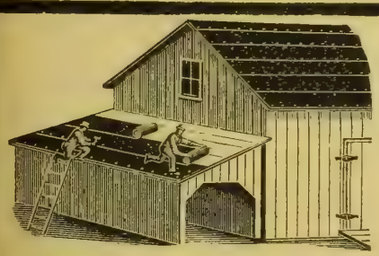
If you want to get the most out of your land, out of your work, out of your cash investment, get Ewing's Seeds. Don't accept substitutes. If your dealer hasn't Ewing's write us direct.

Send a post card for our big Illustrated Catalogue. It's free—and interesting.

Wm. Ewing & Co., Seedsmen, McGill St., Montreal.

Reliable Seeds

1



MICA ROOFING

For steep or flat roofs, waterproof, fire proof; easily laid; cheaper than other roofing.

Send stamp for Sample and Mention this Paper.

Hamilton Mica Roofing Co.

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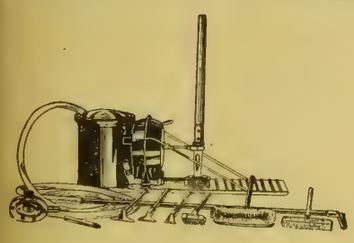


Housecleaning made a delightful undertaking, with a **Perfect Vacuum Cleaner.**

Rugs, carpets, furniture, bedding, etc., thoroughly and quickly cleaned, without being disturbed.—A cleaner that is light, strong, simple in construction, effective and easily cleaned, and has a blower attachment.

Hand Power $25.00 Water Motor $35.00 A. C. Electric $70.00

McKuen's Perfect Combined Washing Machine and Boiler

A PERFECT Washing machine. The latest on the market, "1910"; one that will do the washing right on the stove, while the clothes are boiling, no rubbing, no rinsing, no damage to the most delicate fabric, producing cleaner and much whiter clothes. A complete surprise to everybody.

Prices $10.00 and up

Purely Canadian. Patented bothhere and in United States.
Write for pamphlets and further particulars.
Mail orders receive special attention.

The Perfect Mfg. Co., Guelph, Ontario.

The New Milk Calf Has Had His Day

High Priced Butter Has Put Him Down and Out

The Skim Milk Calf Has Come to Stay

and with Herbageum in his skim milk, he is fully equal to any **new milk calf.**

The Cream is Saved

by the use of one 50c package of Herbageum the cream from one and a quarter tons of skim milk can be saved.

If you want something better than any calf meal on the market try the following

100 lbs. Linseed Oil Cake Meal, say	$2.00
300 lbs. Fine Wheat Shorts, say	3.75
4 lbs. Herbageum	.50
1 lb. Salt	——
405 lbs. at a cost of	$6.25

Not much over 1 1-2 cts. per lb.

Stir about two cups full in a gallon of scalding water and feed warm.

The Beaver Mfg. Co., Ltd.,
GALT, ONT. Sole Manufacturers

Wanted

Live Men.

We want men of brains—with energy.

Men, who want to make good and increase their earning capacity, who are too ambitious to drag along day after day in inferior positions.

We want several men of this class as travelling representatives of the Maritime Farmer.

The Maritime Farmer is an easy seller because nearly every farmer in the Maritime Provinces wants it when he sees it.

To those capable of handling this proposition, we furnish with teams and pay a liberal salary.

If you think you are of the right material and have a capacity for work, write us.

We pay salary or commission. It all depends upon what you can do.

Each application will be dealt with as received.

Personal calls given priority.

The Maritime Farmer,
Sussex, N. B.

GOOD REPORTS

Home Mixed Stock Food a Success

A short time ago we published in this column a formula for preparing Stock Food at home from Barnes English Compound and fresh nutritious grains.

We have received so many words of praise for this formula that we are reprinting it for the benefit of those who may have chanced to miss it.

The advantage of making your stock food at home, using only the pure medicines and fresh grains, and avoiding harmful drugs and worthless fillers, is certainly of great importance to every farmer and stockman.

The formula is as follows: Mix three pounds of Linseed Meal and six pounds Cornmeal with one pound Barnes English Compound, it will make ten pounds purest and strongest stock food that can be made. S. G. Amsden, Windsor, Ont., will send one pound package postpaid on receipt of 50 cents, money order or stamps.

ITCHING ERUPTIONS QUICKLY CURED.

Just a few drops of the famous D. D. D. Prescription applied to the skin will take away instantly the worst kind of an itch. We positively know this.

Oil of wintergreen, a mild, soothing liquid, combined with such healing substances as thymol and glycerine, will penetrate to the inner skin, kill the germs, and heal. The D. D. D. Prescription, made at the D. D. D. Laboratories of Chicago, seems to be just the right compound, as thousands of remarkable cures prove.

Don't go on suffering from eczema or any other itching skin disease, when relief is so easily obtained.

Just write the D. D. D. Laboratories, Dept. F. M., 23 Jordan St. Toronto, and they will send you, free, a trial bottle. This sample will relieve the itching at once, and prove to your satisfaction that here at last is the cure for your torture.

Write for a trial bottle to-day.

For sale by all druggists.

N. B. Potatoes

I grow and have for sale large quantities of Potatoes. Seed varieties a speciality.

Geo. A. Fawcett, Middle Sackville, N B.

The PUBLISHER'S DESK.

I. C. R. PICTURES ARE SOUGHT FOR.—An enquiry recently received by the General Trafic Manager of the Intercolonial Railway, shows how wide is the distribution of a good item of news through the medium of the press. Last November an account of the display of I. C. R. views being shown on the New York Herald bulletin screens along with the returns of the Presidential election, went the rounds of the Canadian newspapers. It evidently traveled even further, for the other day a letter was received from Melbourne, Australia, enquiring about these views, and asking if they could be obtained for lecturing purposes. The views alluded to are beautifully colored steriopticon slides and the selection includes some of the prettiest scenic features along the line of the Intercolonial, such as "Quebec from Levis," "Bic," one of the most beautiful of the lower St. Lawrence seaside resorts, "Famed Matapedia Valley," "Baie des Chaleur," hunting and fishing scenes along the North Shore," "Bore at Moncton," "Reversing falls at St. John," "Wentworth Valley," "Folleigh Lake," "Halifax," and scenes on the "Bras d'Or Lakes." Wherever shown these have attracted great attention and have been widely admired.

BE READY TO CURE HORSE AILMENTS.—Because a farmer has to work with his horses and have their services nearly every day in the year, it is absolutely necessary that he be posted on their common ailments and know how to treat their injuries.

A horse owner should determine to be his own veterinary, at least in the ordinary cases. Little things happen too frequently to horses to be all the time depending on others. It is inconvenient as well as expensive to go for a horse doctor when a horse goes lame or there is a swelling to reduce or a wire cut to heal.

It is not out of place to suggest, as we have frequently done before, that it is wise to have such a thoroughly good and reliable horse remedy as Kendall's Spavin Cure constantly on hand.

Kendall's Spavin Cure is now and for a long series of years has been a standard horse remedy. It can hardly be too strongly recommended. Its compounder thoroughly understood horses and their diseases. He brought the ailment and the cure together and this applies not merely to one ailment but to most of the common troubles of the horse.

In this connection, we want to commend to our readers an excellent little book called "A Treatise on the Horse, and His disease." This book and Kendall's Spavin Cure ought always go together. The book is a wonderful little compendium of horse knowledge. It gives symptoms, describes diseases, suggests proper treatment. In very many cases Kendall's Spavin cure is the only remedy needed. The book can be had at the drug store where Kendall's Spavin Cure is sold or it may be secured by writing to the Dr. B. J. Kendall Company, at Enosburg Falls, Vermont, U. S. A., if you enclose a two cent stamp to pay postage.

RUBEROID COLORED ROOFING PATENT DECISION.—It is now unlawful to use any colored except by painting, "flexible waterproof prepared roofings" other than that made by the Standard Paint Company, New York. This is the sum of the decision, January 24th, 1910, by Judge Ray, of the U. S. Circuit Court. The decision, about 10,000 words, is such a minute examination of the history of materials and processes that it is near to being a treatise on the art of roof-making. The two patents on colored Ruberoid, dated November 22nd, 1904, cover both product and the process by which it is made. Both of these general claims are upheld with an enthusiasm born of exhaustive study.

"The process pointed out in the patent which varies from the prior art was successful. The prior art was not. All the constitutent elements of a product, a new article of manufacture, may be old, as of course these were, but this product as a complete article of manufacture was new, and it was better than any that had gone before. I think the evidence establishes that the first successful colored roofing upon the market was this colored Ruberoid made in accordance with the claims of the patents in suit. They are pleasing and attractive in appearance to those who desire a colored roof and who uses a roofing of this character. They are popular and have an extensve and increasing sale. It is shown that these roofings are durable and serviceable, and that the coloring is permanent."

This Colored roofing is also protected by patents in Canada by the Standard Paint Coy. of Canada Limited and manufactured by them at Montreal.

MAIL ORDER HOUSES COMBINE.—Montgomery, Ross & Co., and the National Cloak and Costume Co., two of Montreal's largest and best known Mail Order concerns, have lately joined forces. For the past few years both these houses have been doing a large business roughout the Dominion, and have earned names for themselves for honesty and fair dealing, that should go a long way towards insuring them success in their new venture. The new firm will be known as "Montgomery, Ross & Co., and the National Cloak and Costume Co amalgamated" and will carry on an exclusive Mail Order business on the lines of the great American houses. The men at the head of the concern have had a large and varied experience in the Mail Order business and have gone to work on lines that are bound to bring results. The growth of the Mail Order business in Canada in the past few years has been phenomenal and it is not hard to predict great things for the firms that get on the field early. Day by day, as the railway, telegraph and postal systems are extended, the people of this great land are brought closer together, and thanks to the progressive spirit of such firms as this, the rural population is able to easily obtain most of the luxuries of city life, as far as household and personal effects etc., are concerned. The very existence of our country depends greatly upon the rural population. So long as we can keep the young people on the farms there is no limit as to what we may achieve, and the best way to keep them at home is to make that home as attractive as possible. A few years ago this was a big undertaking, but the advent of the Mail Order home has changed things greatly. Countries as easily as if they lived in the city, stores, just as easily as if they lived in the city, and the guarantee of a reliable house is all that is necessary to insure them fair, honest treatment.

SUNBERRY—THE IMPROVED WONDERBERR

LUTHER BURBANK'S GREATEST CREATION. A Luscious Berry Ripening in Three Months From

SEED 20 CTS. PER PKT. 3 PKTS. FOR 50 CTS. POSTPAID.

This is positively the GREATEST new Fruit and the best NOVELTY of modern tim
These are facts which no one can get away from. The proofs are overwhelming in num
and conclusive in character. Grown last year by 350,000 people.

Fruit blue-black like an enormous rich blueberry in looks and taste. Unsurpassed for ea
raw, cooked, canned or preserved in any form. This great garden fruit is equally valuable i
dry, cold or wet climates. Easiest plant in the world to grow, succeeding anywhere and yie
great masses of rich fruit all summer and fall. The greatest boon to the family garden ever kn
Leaves and branches are also used for greens and are superb. Everybody can and will grow i

Luther Burbank of California, the world famous plant wizard, originated the Wonderberry
turned it over to me to introduce. He says of it: "This absolutely new berry plant is of great
terest and value as it bears the most delicious, wholesome and healthful berries in utmost
fusion and always comes true from seed"

READ my Catalogue for full description, culture, uses, etc. Also scores of testimonials f
well-known and reputable people all over the country. Read the "Crime of the Wonderberry"

THE SUNBERRY is an improved form of the Wonderberry which proved so satisfactory
year. It is greatly superior to the original type, and I alone have genuine seed.

SEED 20c. per pkt.; 3 pkts. for 50c.; 7 for $1.00. *Agents Wanted, $2,000 in cash offers.*

With every packet of seed I send a booklet giving 99 Receipts for using the fruit, raw, co
canned, preserved, jellied, spiced, pickled, jams, syrup, greens, etc. It is superior for a
these uses. **Also a copy of my 152-page Catalogue with every order.**

MY GREAT CATALOGUE of Flowers and Vegetable Seed, Bulbs, Plants and Bare
New Fruits FREE to all who apply. 152 pages, 500 illustrations, and colored plates. I have
in business 35 years and have half a million customers all over the country. Complete satisfa
guaranteed to everyone. Do not fail to see the many great Novelties I am offering this yea
which the SUNBERRY is the greatest ever known. *Address,*

JOHN LEWIS CHILDS, Floral Park, N.

P. S. This offer will not appear again. Write for Sunberry seed, and Catalogue at once.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation, you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges. The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

Address—**MARITIME FARMER, Sussex, N. B.**

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., March 22, 1910. Number 12.

The Prince Edward Island Provincial Seed Fair.

Three in One---Seeds, Household Science and Poultry.

SUMMERSIDE, P. E. I., was quite a busy town on March 9th, 10th and 11th, for there the farmers of the Island province had congregated to attend the Provincial Seed Fair, where the various seed grain growers were viewing with each other for supremacy in their respective classes and, to listen to instructive addresses from agricultural experts and others who take a deep interest in the farmer's calling and discuss with them re matters of importance to Prince Edward Island agriculture.

Not to be outdone by the sterner sex, the good ladies of Prince Edward Island also congregated at Summerside and while the former made a display of seeds, the latter made a magnificent display along household science lines and held a ladies convention, where much practical discussion took place and where interesting addresses on matters pertaining to home life were given.

Officers of New Brunswick Farmers' and Dairymen's Association for 1910.

Top row, from left to right—Alex. F. Johnstone, St. John; J. R. Oastler, St. Andrews; S. L. Peters, Queentown; Hon. C. H. LeBillois, Dalhouise; B. R. Violette, St. Leonards; J. E. Long, Long Settlement

Middle row—Chas. Peters, Elmhurst; H. H. Smith, Treasurer, Hoyt Station; Geo. E. Fisher, Cor. Sec'y., Chatham; S. B. Hatheway, President, Fredericton; Bliss M. Fawcett, Rec. Sec'y, Sackville; John Moody, Bathurst; W. H. Moore, Scotch Lake.

Lower row—Isaac Baird, Chipman; S. B. Wright, Hillandale.

Prince Edward Island's most progressive poultrymen also made a showing of their feathered friends, that was most creditable. Despite the fact that no prizes were offered, some of the very best and most valuable birds, owned in the Island province, were shown, and did a double credit to their owners for thus assisting to make the farmers' convention as interesting and instructive as possible and will, undoubtedly, be the means of interesting not a few of those present in the culture of more and better poultry.

AT THE SEED FAIR.

The seed fair was held in Thomas Andrew's warerooms. Rev. Dr. Gauthier, the President of the Association; L. U. Fowler, the Secretary, and their staff of assistants, did their utmost to make the fair arrangements work smoothly and well and bring into prominence the object for which the fair was intended. Despite the large number of exhibits, there was ample room to display the grain, potatoes and other seeds to the very best possible advantage.

The quality of the grain was of a high order and of better color than one would expect, after the heavy rains that were encountered during the harvesting season. The percentage of discolored grains was very low.

COMPARATIVE NUMBER OF EXHIBITS IN

	1909.	1910.
Wheat	49	60
Oats	103	101
Barley and Buckwheat	51	39
Beans, Peas and Fax	26	21
Timothy and Clover	42	37
Corn and Other Seeds	29	36
Potatoes	206	147
Weeds and Weed Seeds	13	14

From the table below, it will be noticed that there was a gain in number of exhibits in the classes for wheat, corn and other seeds and in collections of weeds and weed seeds, and a slight loss in the other classes. The greatest falling in number of exhibits was seen in the potato classes, but the exhibits showed more care in selection re type, point of quality and freedom from disease and other blemishes which shows that farmers are paying more attention to specializing in varieties that have proved the most satisfactory and are discarding worthless varieties.

THE JUDGES.

Mr. S. J. Moore, Maritime representative of the Seed Division, Ottawa, had charge of the judging and personally judged the small seed classes. Mr. R. Robertson, Superintendent of the Experimental Farm at Nappan, N. S., judged the potato classes. Mr. Donald Innis, the veteran seed grower of Tobique River, N. B., and winner of the Steel Briggs' silver cup for the best exhibit of seeds for three consecutive years at the Maritime Winter Fair, Amherst, placed the awards in the wheat sections. Mr. J. Artemus Clark, Superintendent of the Prince Edward Island Experimental Farm, placed the awards in the oat classes. A full list of awards will be found on other pages of this issue.

IN THE HOUSEHOLD SCIENCE DEPANTMENT.

The household science department was conducted in the McNeill building, which was thronged with women and men of all ages, who admired the tastefnl display of the many tempting viands, which the intelligent wives and daughters of the Island province had entered for competition. The total number of entries was 607, as compared with 445 entries in 1909, and goes to show that the ladies are taking an active interest in all matters relating to the science of the home.

IN THE POULTRY DEPARTMENT.

The poultry department contained many prize-winning birds from the yards of some of Prince Edward Island's most foremost poultrymen. There was scarcely a poor bird in the number. As there were no prizes offered, the official fakirs remained at home and it was left to honest breeders to show what good poultry looks like and it was indeed a relief to see such a creditable show, without the admixture of inferior birds or any evidence of fakirism. Those professional exhibitors, who beg and borrow birds for special occasions, did not think it worth while to go to any trouble in educating along poultry lines. Why should they? They have no birds or eggs for sale. All they want is the money that exhibition associations offer and which rightly belongs to those who are honest beeders, who are striving to create a healthy interest in poultry culture.

Among those who exhibited poultry at Summerside were: John Rogers, Capt. John L. Read, Geo. Leightizer, J. H. Pritchard, Frank A. Johnstone,

Arthur Allen, L. H. D. Foster, Arthur R. Boats, Jarvis P. Tanton, Dr. Alex. McNeil, Frank Glydon and Alfred Groom. These gentlemen have good birds, they can supply birds and eggs in season, they have a reputation to maintain and they are not loath to go to some expense in furthering a general interest in poultry keeping.

THE AGRICULTURAL MEETINGS.

The first in the series of Agricultural meetings was held in Market Hall with Mr. Joseph Taylor, Freeton in the chair. The hall was packed to the doors.

AGRICULTURAL EDUCATION.

By Mr. Garnet LeLacheur, principal of the Hillsboro Consolidated School was the first subject on the programme. Mr. LeLacheur gave an interesting account of his own early education on the farm, at the Guelph, McDonald and Truro Agricultural Colleges. His experience and observations impressed him with the fact that the farmer must be a man of more brains than brawn, and he must make his home surroundings as attractive and convenient as possible. He outlined the growth of the educational movement from its earliest stages up to the present time. He expressed the opinion that some of the time spent in studying foreign languages in our schools and colleges might be better employed in the study of some other subjects of more importance. He had made a mark of 97 points in his Greek examinations when leaving the Prince of Wales College in 1903 but had not had occasion to use it ever since. He considered that the study of physiology and kindred subjects would have been time better employed as on the foundation of logic and physiology is built our modern sciences. Foreign languages were not necessary for mental gymnastics but had their place as a source from which many of our English words are derived.

Present day education should be shaped so as to train the student for life work along industrial lines and made to conform to the conditions of the great majority of boys and girls who must, of necessity leave school at an early age. Industrial schools were established at McGill College and in Halifax; the farmers industrial school was the Truro Agricultural College. The change to a more industrial system of education was slowly but surely coming. He thought Prince Edward Island farmers earned their money too easily and did not look to the future as seriously as they might. Agricultural Colleges were opening up and training along new avenues of thought, but very often, details worked out by experts in other provinces might not be suitable for Prince Edward Island conditions but all feasible ideas should be put in practice. All other professions were so dependent on the farmer's success es that they wese willing to help in the onward march of progress in the basic industry of agriculture.

Detriments to progress, such as insects and fungus pests, undrained lands, etc., were common and in order to be mastered one must make a thorough study of them.

When all countries that possess an agricultural college are clamouring for more financial assistance to help extend their work how could the farmers of Prince Edward Island be true to their profession if they, for a moment, entertained any prejudice against an agriculturial college or the thought that is being disseminated therefrom. Each and every Island farmer should be deeply interested in the Short Courses at Truro Agricultural Collage. Agricultural Societies were important factors in Agricultural education by means of the various kinds of work which are being conducted by such societies. Exhibitions, in order to be of the most benifit to farmers should be carried on along strictly agricultural lines and less attention paid to fast horses and acrobatic performances. Farmers' institutes were formerly conducted by college professors until the demand for meetings became so heavy that they could not cater to all and consequently some of our most progressive, practical farmers had stepped in to help carry and distribute the light.

Farmers Clubs were also prominent factors in forwarding educational movements and the speaker strongly urged the farmers in their respective communities to band together for co-operation in their common cause. Then they could be the power behind the throne and the powers that be must listen to their call.

Science and common sense must go hand in hand and every farmer should take one or more agricultural papers and all the bulletins he can get and study them closely which would give him better results than spend too much time, as is often done, in talking politics. It was a lamentable fact that teachers were so poorly paid that they were ready to step into some other profession that gave more promise of advancement. If present conditions continue it would not be long before all our schools would be in the hands of ladies. He was glad to note that the farmers were beginning to clamor for the teaching of agriculture in the public schools. The McDonald movement was closely associated with the idea and has done an inestimable amount of good. The speaker was opposed to teaching agriculture in the Normal School and in Prince of Wales College because they have not the equipment but the underlying sciences of agriculture should receive special attention. He considered the farmers of P. E. Island should call for more agricultural experts in their department of agriculture as it was too manifold a job as at present conducted for one man to look after. Many of the smallest schools throughout the Island might be consolidated into larger and better schools where more efficient work could be conducted. It would cost more to maintain such schools but it would be a paying proposition. To many of the brighter boys and girls of the Island were leaving for other countries and too many of the inferior ones were consequently left behind. To this fact he attributed the deterioration that causes so many unfortunates to domiciled at the Falconwood asylum.

By following proper systems of farming, our boys and girls too would have pleasant and profitable and profitable employment at home. Nova Scotia would soon be the Scotland of Canada in industrial lines and with such excellent markets wieasy reach why should not Prince Edward Island be the garden of Canada? The transportation problem was a serious one for Prince Edward Island but so many different opinions had been voiced that it was a difficult matter to settle on the solution. Then there was too much cussedness on the part of people who shipped produce containing too many varieties and too many grades which was responsible for low prices and for which the just suffered as well as the unjust.

Reform could not come altogether through our legislators; we must assist them and we must also place at the head of our affairs men who are men in every sense of the word, and who have our common interest at heart.

There were three ways by which a nation could obtain wealth viz:By war which involved robbery. By commerce which involved cheating and by agriculture, the honest farmer's trade. Our educational system should be taken out of political grasp. People, as a rule, were too prone to lavish expenses on their churches in which they spent a short time only one day in the week and neglected the beautifying of their school houses where their children spend the greater part of the week. This was a serious mistake as was the frequent changing of school teachers. He put forth a strong plea for more loyal support to the Truro Agricultural College and trusted the day was not far distant in the future when it would receive the support that would entitle it to the name "The Maritime Agricultural College."

DISCUSSION.

The discussion that followed Mr. LeLacheur's address was led by Inspector Wilfred Boulter of Prince County, who emphasized the fact that rural school education should conform more with the needs of the boys and girls who leave school at an early age. For these, education should be made as practical as possible and should have a direct bearing on life and home. There was very little agricultural teachings taught in Prince County, but Latin was being studied with great vim. Present systems of edueation educated our boys away from the farm instead of fostering in them a love for the farm. Were the young men of Prince Edward Island given a proper chance? Were they encouraged to remain on the farms or was it a case of all work and no wages or play? The farmers, by their unanimous banding together had succeeded in controlling the running of automobiles on Prince Edward Island. Why not band together in a demand for a system of education that will be of the highest importance to the boys and girls in our rural schools? A system of education sutiable for a town or city school may not be a satisfactory system for rural schools. Education should mean more than maintaining schools and sending pupils to the Prince of Wales college. While a great many of the present day teachers are not very well versed in agricultural matters they can, nevertheless, create a healthy interest in the subject. School gardens can be made more effective in demonstrating the underlying principles of the science of agriculture. Parents can do much to encourage the boys and girls by giving them a plot of land and some seeds with which to conduct experiments on their own farms. The practical work will appeal to our boys and girls much more strongly than the theoretical. Behind all movements for the necessary reform in our system of education must stand an intelligent public sentiment. He did not think Prince Edward Island Schools were declining but they were suffering from an arrested development which must be speedily remedied. The amount of money spent in sending young men to the Truro Agricultural College could not be spent to better advantage in any other line.

THERE IS NOTHING MORE EXPENSIVE THAN IGNORANCE

said Prof. Theodore Ross in following up the subject of agricultural education. Ignorance and dishonesty were ruining the Island seed trade. The boys who had attended the Short Courses had been highly benefited by the lessons received and a great many of them were now working along more modern lines.

MR. PETER BRODIE,

one of the Shourt Course students for several years had become imbued with the necessity for seed selection, spraying and treatment for smut and scab. He thought the Island legislature should have a greater representation of farmers in its ranks. It contained too many professional men at present. In concluding he put forth a plea for a central Institute, for the whole Island, which would be patterned after the Nova Scotia Farmers' Assocaation, where delegates from the various institutes scattered all over the province could meet and frame resolutions that would assist our legislators in directing the agricultural interests of the province by letting them know what the farmers wished them to do.

REV. DR. GAUTHIER

thought our schools must be declining if they were not going ahead and the former was too liable to be the case as a great many of the best teachers were taking up some other avocations that promised greater remuneration. Prince Edward Island farmers were at present assisting rich men's sons to get an education at the rate of $50 each year per student. How many of them remain at home to better their province after they get their education? As a rule, they went abroad and while he was proud to say Islanders were acquiring fame in distant lands he believed there could be a retrenchment made that would give the boys who would stay on the farms to forward Prince Edward Island a better chance, by awarding Scholarships at the Truro Agricultural Collage, and rich men's sons could pay their own way to fit them for their coverted fame that would benefit other lands but do very little towards upbuilding their own province. He concluded his discussion by saying that "until you spend as much on your farm boys as you do for boys who are to follow other professions you will never reach the ideal as 'Garden of Canada' yea, of America."

OBSERVATION OF AGRICULTURAL METHODS IN DENMARK AND OTHER EUROPEAN COUNTRIES

was the theme of an interesting talk by Mr. J. E. Sinclair who had been a visitor to European countries last fall as one of the Commission who went there to glean ideas that might be applied to Canadian conditions, particularly along the line of pork production. He related the methods that were followed re breeding, feeding, slaughtering and marketing of hogs in Denmark. Co-operation seemed to be the keynote in all these operations. The various interests were safeguarded against fraudulent practices and Danish products in the bacon, dairy and poultry lines were very much in favor wherever they were introduced as the description on the package was, as a rule, a true statement re the contents of the package.

POULTRY RAISING.

On Wednesday evening in St. Paul's Hall, Prof. J. P. Landry, of Truro, addressed a large audience. The hall was crowded to the doors. He gave a half-hour talk on poultry culture in which he set forth the underlying principles of success in the industry. Improvement by selection must be followed in the poultry lines as well as in all other lines of live stock if one wishes to succeed. Good stock good feed and comfortable quarters were the main essentiafs. In reply to the question, "which is the best breed?" he replied that strain was more important than breed. Some strains of the same breed were better than others. One had to settle the breed question according to his own fancy and local conditions. While trap nests would not be extensively used by farmers, every breeder should use them in establishing heavy laying strains from which future breeders could be obtained. Feed should be as near like that which the fowls pick up in summer as possible. Comfortable housing did not necessarily involve expensive buildings. Plenty of fresh air, cleanliness, sunlight and freedom from drafts and vermin were the most important considerations to

be observed in planning a poultry house. He then illustrated, on the screen, by means of lantern slides, several diseased conditions in poultry, desirable and undesirable qualities of birds were contrasted, modern methods of hatching, brooding and rearing of chicks as well as various types of desirable and cheap poultry houses and views of several large poultry establishments he had personally visited. The interested audience closely watched while they profited by the explanations and remarks he made re the different pictures until the series was completed at a late hour.

So interested were some of the Charlottetown delegates that they made arrangements with Mr. Landry to repeat his lecture at Charlottetown on Friday night.

HUMUS AND ITS IMPORTANCE IN MARITIME AGRICULTURE

was the theme of an interesting and instructive address by Prof. M. Cumming, of Truro when the farmers had convened in Market Hall on Thursday morning. This excellent address will be published in our first issue in April. At the close of the address an interesting discussion on the care of manures took place until the noon hour when the delegates returned to their respective hotels and boarding houses feeling that they had spent the morning hours profitably and well.

ON THURSDAY AFTERNOON.

Hon. John Richards, Commissioner for Agriculture acted as chairman and a large and appreciative audience listened attentively to an interesting address on subjects of vital importance to Prince Edward Islanders, by Mr. Deedmeyer, American Consul at Charlottetown. Mr. Deedmeyer has the interests of the Island Province deeply at heart as is shown by the interest he has taken in investigating its resources. In concluding his address in which he eulogized the products of Prince Edward Island he set forth a strong plea for more intensive farming and giving attention to the selection of good stock and seeds and working together for higher intellectual benefits.

A standing vote of thanks moved by Rev. Dr. Gauthier and seconded by Mr. Matheson M. P. P. was tendered to Mr. Deedmeyer for his kindly interest in agriculture matters.

AGRICULTURAL EDUCATION

Prof. Cumming was then called on to say a few words re agricultural education. The giving of an agricultural education to our boys was a sound proposition. While some farmers who had never attended college had made a decided success of their business; they would have enhanced these successes if they had had the advantages of a college training. A college training will not make a man practical but the education acquired there will help to direct practice along the most approved paths.

Science without practice was helpless. Farmers, as a rule, were not true to their profession; they should do more to create a sentiment towards their calling. He was glad to welcome Island Students to the college and would continue to do so.

Mr. J. A. MacLean, of Lot 16, as one of the students at the short courses expressed his appreciation of the work that is being done there and of the benefits he himself had acquired from his attendance.

GRADING SEED GRAIN.

The question of grading seed grain was then discussed and various standards of excellence were proposed. Finally it was resolved that the government be asked to enact that all oats sold to go out of the Province be classed under either one of the folfowing grades whose requirements are as follows;

No. 1. True to name. Not more than 20 foreign grains to the bushel . 95 per cent germinable. Not less than 34 lbs. per bushel and free from all noxious weed seed.

No. 2. True to name. Not more than 10 foreign grains to the pound. 90 per cent germinable. Not less than 34 lbs. per bushel and free from we(d seeds mentioned in the Seed Control Act,

No. 3. All classes of oats that do not conform, to either No.1 or No. 2 standards.

ON THURSDAY EVENING.

Rev. Dr. Gauthier, president of the association, acted as chairman. He said another page had been added to the annals of the seed fair and on it was incribed success. This success was due to the kind encouragement of the government and the good people of Summerside, backed up by the hearty co-operation of the farmers.

In point of quality the present seed fair had excelled all previous fairs and the household science department had excelled both in quantity and quality. Since the last seed fair many important matters of interest to farm life in Prince Edward Island had transpired. An Agricultural experiment station had been founded near Charlottetown and a general interest in agricultural education was being aroused. He liked to see matters of this kind come gradually for he believed they would be more lasting if they came through the process of evolution than if they came by revolution. Referring to the consolidated school movement, he said that like temperance the public must be gruadually educated re its importance. If we are to be fair to our children we must give them the very best education that will fit them their future callings and instead of paying good teachers meagre salaries they should be so well paid that they would not look upon teaching as a stepping stone to some other profession but would abide in the teaching ranks. Farmers, as a rule, were too prone to laud the successes of our Island boys and girls who acquire fame in distant lands and to say little or nothing of the bone and sinew that make successful careers at home. The consequence is that at an early age the eyes of our youths are cast towards distant fields of action.

An agricultural college was badly needed and as it was not advisable to have small ineffecient institutions for the respective provinces he believed Prince Edward Island and New Brunswick should join with Nova Scotia in maintaining and promoting one large efficient college.

Farmers' Institutes in various sections of the Island were doing excellent work and in order to be still more effective as guiding powers in agriculture he would like to see a central institute formed were farmer delegates form the various institutes could meet once a year and discuss questions of common interest.

He was pleased the ladies of his province were becoming interested in Womens' Institutes and he trusted that ere long a superintendent of Womens' Institutes would be available who would go throughout the

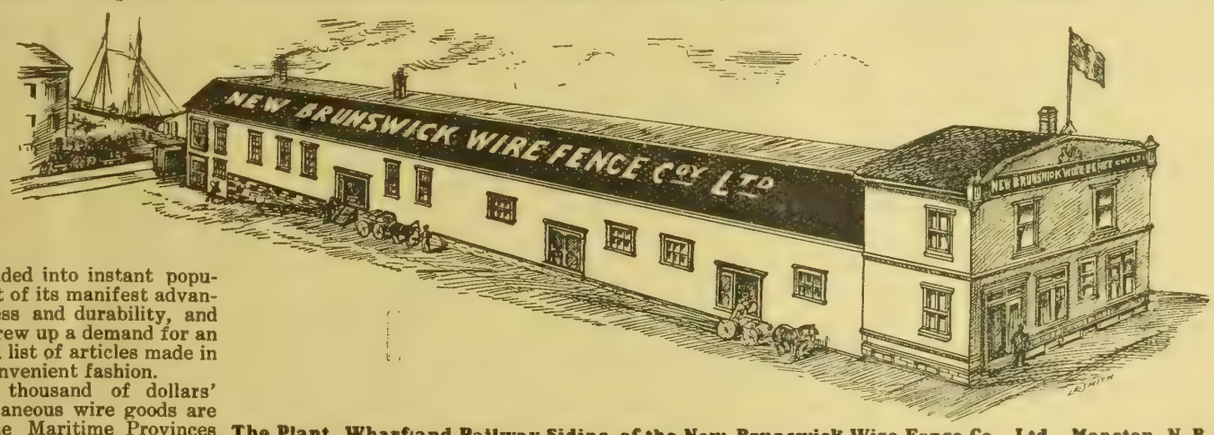
(Continued on page 333.)

The New Brunswick Wire Fence Company, Ltd., Moncton, N. B.

It is within the memory of the present generation when wire fencing, wire baskets and numerous other articles of wire manufacture entered into widespread use, and the corresponding displacement of wood, tin and iron that ensued. Some innovations require years of patent advertising to overcome the habits and prejudices of established customs, but the marvelous inventions and discoveries of modern times have accustomed the world to expect constant improvements in metals and mechanics, and wire work bounded into instant popularity on account of its manifest advantages in lightness and durability, and there speedily grew up a demand for an almost unlimited list of articles made in this light and convenient fashion.

Hundreds of thousand of dollars' worth of miscellaneous wire goods are consumed in the Maritime Provinces annually. Wire fencing stretches for miles through the country on every hand. It surrounds beautiful private and public gardens in cities, towns and villages. It encloses hundreds of prosperous farms in New Brunswick, Nova Scotia and Prince Edward Island. There is probably not a household or public building in the thirty-six Maritime counties which does not contain several wire articles.

But it is probably not known by many people that the only manufacturers of wire fencing in the Maritime Provinces are the New Brunswick Wire Fence Co., Ltd., situated in the central Maritime city of Moncton, the railway hub of the provinces, and the point to which thousands of sight seers bend their steps to see the bore of that famous tidal wave over, the Petitcodiac.



The Plant, Wharf and Railway Siding of the New Brunswick Wire Fence Co., Ltd., Moncton, N. B.

A wharf forms part of the premises of the New Brunswick Wire Fence Co., Ltd., but when you consider that several thousand tons of wire and other raw material is received by rail and practically the same quantity and weight of finished articles is in turn shipped to all parts of the provinces, you will realize that Moncton possesses unique advantages in the various railway lines that converge in that city and provide its merchants and shippers with rail facilities surpassing any other eastern community.

The New Brunswick Wire Fence Co., Ltd., started business in 1901 with moderate capital and faced many difficulties, which have been overcome by careful management and good business methods, with the result that orders have multiplied to such an extent that the works have undergone extensive additions with a view to enlarging the output to three times former dimensions.

The two-storied building, extending a block's length on Main street, on the corner of King, is the home of this vigorous enterprise. In this lengthy building the floor area equals three acres and the peculiarly constructed machines for manufacturing various parts of the products will immediately engage the attention of a visitor. An insignificant mechanical contrivance in one corner, weighing less than one hundred pounds, manufacturers twelve hundred staples per minute. Further on a noticeable giant machine, when in operation, is capable of finishing four thousand rods of completely made fencing a year. So it is from room to room. Everything is of modern design for expeditious manufacturing and for uniform efficiency of standard production. In stores and warerooms at the rear are found quantities of raw material, fences, gates, etc., convenient for delivery to or from freight cars on the company's siding or schooner at the company's wharf. In this way, during last year, one thousand tons of wire, including fifty car loads of raw material arrived, and now finely made, it stretches all over the Maritime Provinces and adorns many homes.

During the milder seasons there are one hundred and fifty men engaged in the shops and on outside contracts. All machinery is driven by electric motor. An enumeration of the company's products includes woven wire fences, coil spring fence wire, plain and ornamental fencing and gates, staples, fence tools, wire window guards, wire barrel covers, wall racks, waste baskets, flower bed guards, trellis guards. Orders for making any and all kinds of wire articles are given prompt attention. Shipments are addressed to all parts of the provinces and as far west as Montreal.

Three travellers cover this territory. The officers of the company are Dr. C A. Murray. President; A. C. Chapman, Secretary and Manager. The foregoing and Messrs, J. T. Hawke, Hon. C. W. Robinson and E. W. Given are the directors.

The Secretary and Manager, Mr. Chapman, is the active mind in development of the business of the New Brunswick Wire Fence Co., Ltd. This prosperous institution is not the out-come of any supernatural or magical power, which the founders and managers were able to control. There is no royal road to success and fortune in manufacturing any more than in any other occupation. Nor, generally speaking, is one country a better situation than another. Local circumstances do vary, but there are certain indispensible stepping stones to business achievement, which have been mentioned at the inception of this sketch, and these must always be present. The success of the New Brunswick Wire Fence Co., Ltd , is a particularly instructive lesson Why? Because if a company can be incorporated to supply one line of manufactured goods, which was previously imported, and in a few years can develop a large business in the face of organized competition, the question naturally arises, what is there to prevent numberless other manufacturers being established to cater to other wants of the home market ? There is no good reason, the more the merrier.

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—**"I saw your adv. in the MARITIME FARMER."**

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The Circulation of this issue is 8,000 Copies. Every one going to a bona fide subscriber.

MARCH 22, 1910.

Dates of Issue.

April..... - 12-26
May..... - 10-24

THE FARM AND THE SCHOOL.

That our rural schools are not training the boys and girls of the farm for the duties and responsibilities of farm life, is a fact too well known to need repetition. With all of our boast and splendid advancement, the fact cannot be ignored that our country schools are inefficient. They are not meeting the great demand of the agricultural classes.

One of the principal reasons why our country schools are not better is the lack of interest shown by those who till the soil. We have been accustomed to leave the education of our children entirely in the hands of the teacher. We have been too unconcerned about the welfare of those upon whom the destiny of this country must rest.

Without the interest and co-operation of the community it is impossible to have a good school. The teacher, like any other individual, is largely a creature of enviroment. His enthusiasm for and interest in the farm will depend upon the support given by those who live on the farm. There is need of utility, harmony and co-operation between the school and the farm.

While the laws of most states require teaching of elementary agriculture in the public schools, few have met this requirement, Teachers are not prepared, facilities have not been provided and the people have not urged it. It is, then the duty of every patron and school officer to assist the teachers in this great work. Parents should urge, directors should insist that practical courses be given in agriculture. Not only should your request be made, but your help should be given.

Many of our most successful teachers are women. They are for the most part, competent and enthusiastic for the cause of education. They would willingly undertake this work if facilities were placed at their hands. The school garden especially appeals to most teachers. Here is where the help of the farm is useful. If land is not available on the school ground, a garden and experiment grounds should be furnished from the nearest farm. Teams and the necessary implements should be placed at the disposal of the teacher. The best seed and fertilizer should be donated. The entire community should take a part in this important work.

The progress of this study would be greatly accelerated if contests among the students were open and suitable prizes given for worthy products. These exhibits would arouse more enthusiasm and result in more interest in farming than any other frctor. The best of speakers could be secured and a farm and school institute held. This would be the beginning of a general awakening for agriculture in the public school. It would unite the public and school and give your boy and girl an inspiration for farm life.

From the public school should come inspiration for farm life, from it should radiate sentiment that will increase the products of the farm, instill a desire for education and endear the children to its enviroment. The farm must help the school to this.

THE BANK OF SOIL FERTILITY.

Think of it ! Some parts of this country have been so exhausted by continuous cropping without putting any fertilizer bank that where the soil ought to contain, and does contain on lands that have not been thus robbed, .4 per cent of nitrogen, it in reality holds not more than from .2 to .3 of one per cent ! What a story it is ! How ashamed we ought to be that we have dealt this way with our richest resources !

The man who does a little banking business watches his accounts wonderfully close. The law says he must. If he issues a check on the bank when there is no money to his credit to meet it, the law says he is a criminal and must be punished for it. So it stands him in hand to be very careful how he overdraws his account.

But with the farm bank of soil fertility we go on year after year taking out, taking out and never putting anything worth while back again. It is so wasteful ! Not only that, it is slow suicide. Still worse, it is stealing from our boys and girls, our friends and neighbors, who will occupy these lands after we are done with them.

Not only the nitrogen goes, but other essential elements that go to produce crops. These are not simply permissible elements ; they must be in the soil or we are undone. This is why so many farmers all over the country today are almost flat on their backs because they cannot get any crops worth while. And it is going to be worse instead of better, unless we wake up to the importance of keeping up our farm bank of deposits. Many sections of the country have been under the harrow for many generations. Naturally, they were good, rich lands, but now look at them ! it is almost enough to make one sick to think how sorry is their condition.

But there is a brighter side to this. Let's not be discouraged by the wrong doings of our forefathers, nor indeed for our own. There is no use in being downcast. The thing to do is to say to ourselves, and say it as if we meant it, "I will stop this waste ! I will begin now to build up my farm once more and have it, if not better at least as good as it was when I took it." That would be the most hopeful indication possible.

And we can all do that very thing. How ?

One of the best ways known of maintaining soil fertility is to feed out the stuff grown on the farm, or at least a good share of it, right on the farm, and turn the digested food back upon the land.

In our day we hear a great deal about humus. Humus. What is it ? Plain, old Anglo-Saxon words are always best. In simple language, humus, as we have in our soils to-day, is nothing more nor less than plants of all kinds which at one time grew here, have in their course rotted and fallen back on the ground and so in time become a part of the soil. That is all there is of humus, but it is a wonderfully interesting story to follow it through. That is not our object now, however.

What concerns us now is the fact that this humus has been taken out of the soil in one way and another, chiefly through the cultivation of crops. That is the great reason why our lands are so poor. And the question now is, how to get that humus back. Here is where the value of stock-keeping in some form comes in. Cattle eat grasses, roots, grain, all of which comes straight from the ground. Now if we take their droppings and put them back on the land, we restore to a great degree the soil elements we need.

So it is important that we should stop selling off the crops we grow so universally and turn our attention to some form of farming which will enable us to build up our farms. By the use of some kind of commercial fertilizers we may still further enrich the droppings from our cattle and do the work of building up faster than we could to depend upon barnyard manure alone. It takes good judgement to do this, however.

For this reason it seems to me that we cannot do anything better than to keep all the cattle we can economically on our farms. If we turn our attention to dairying, we shall all the time be realizing good returns for our work and at the same time be getting the fertility we need for our farms. Ashes and lime are fine to help out the manures we get from our cattle. We may plow under clover and other green crops and accomplish the same results. That, you see, furnishes us the rotted vegetation.

Once more, we need to take good care of our forests. These in turn help to keep humus in the soil. Because, forests aid in helping the land near them hold the moisture needed for crop production. We have done wrong in cutting our woods off ; but even here we may turn over a new leaf and undo what we have done in the past. We ought to do it It is such fascinating work ! If a man's heart is in it there is none more interesting in all the world.

A HABIT TO ACQUIRE.

There are few habits that any farmer can acquire that will be more profitable than that of asking himself constantly why he does this or that. If he asks and answers this one question in earnest, he is bound to learn a great deal, and is certain to become a better farmer thereby. The man who asks himself why he follows any particular practice, and seeks to get down to rock bottom in the matter, is bound to consider the principles with which his practice is concerned, and he is thus led to relate cause and effect. If this leads to a more intelligent understanding, it means not only that effort can be directed to better purpose, thus reducing the necessary amount of work, but it also means a great interest in the task at hand, thus lessening the sense of drudgery which must necessarily attach to any labor in which interest is not taken. To work merely to get work out of the way, going through an interminable routine of duties without the joy of understanding, has about it a great many of the elements of slavery. But the man who discovers principles and works with them is the conscious copartner with the great laws of the universe. Looking for the reasons may or may not change our practice. Agricultural investigation has shown that many of the old processes, based on experience are scientifically correct, and has shown why they are so. There are principles underlying all farm work, interesting reasons and facts back of them, and the habit of looking into them is a most useful and helpful one.

EDITORIAL NOTES.

Better livestock, better barns better poultry, larger crops, should be the vision of those who are now planning operations for next summer. The reality will doubtless be a larger bank account.

Law and Enforcement Made Necessary.

A well known Maine man, just now stopping in another State, is responsible for the following, given directly to the writer. Said he: "I was in a Grange session recently when one of the members brought in a barrel of apples he had just purchased and because they came from Maine, where a fruit law was in operation, he promised the company a rich treat. The barrel was marked Extra Fancy Baldwins put up by....., Maine. (I have the name and further evidence to used when desired. Ed.) When opened the apples showed large and fine for perhaps eight inches, but the great bulk, in the middle of the barrel, was too small and mean to make into cider or give the pigs. I tell you I felt ashamed of my own State."

What decent man wouldn't be ashamed? Here was fraud, which was intentional and this man who packed that barrel of apples ought to go to State's prison. There is no excuse for such dishonesty. Both the contents and the branding spoke of a deliberate purpose to defraud, and this merits severe punishment. Unfortunately the law we now have does not permit an inspector to open a closed package, but that authority must be given. Every man who desires to improve orchard conditions is the sufferer. The State has lost its old-time reputation by just such bare-faced fraud and to win it back an honest pack must be made certain in every case. The purchaser has the right to what he purchases and the State must see to it that he has it. Such dishonesty as is here reported must be stopped, or every department of business life in the State will be injured. The reputation of Maine is in the balance, and so long as one man deliberately cheats in packing and branding so long will every other apple grower suffer in reputation and loss in dollars. The good of the industry is far and away above the unrighteous gain of any one individual.

The substance of the above article which appeared in a recent issue of the Maine Farmer, apples to Maritime Provinces conditions as well. We note that several Maritime Province men were found guilty of violating the fruit markets act in 1909. We trust their number will constantly grow less.

Fertilizers and Humus.

Many farmers have a prejudice against the use of commercial fertilizers, thinking their use is an acknowledgment of poor farming. I cannot understand why this should be the case, for the application of commercial fertilizers restores the balance by adding the plant food which has been taken out of the soil. When bone meal is applied it is only returning to the soil what has been sold off in the bone of the animals produced on the farm. When acid phosphate or nitrate of soda is used it is taken from the inexhaustible store which nature has deposited in the south putting it where it is needed for the growth of plants. The same is true of the potash mines in Germany, where there is a great supply of soluble potash ready to be used as soon as that in the soil and such native sources as wood ashes are exhausted.

Many farmers fail in the use of commercial fertilizers because they do not realize that nature stores up in the virgin soil large guantities of humus which has been steadily depleted by each crop. The use of barnyard manure will increase the amount of humus. One of the chief advantages of commercial fertilizer is that it has no humus, thus lessening its bulk and enabling it to be shipped long distances, which could not be profitably done if it contained bulky humus, as stable manure does. In order to use commercial fertilizer successfully, care must be taken to keep the humus content of the soil up to the same standard as is found in new land. This can only be done by plowing in vegetable matter. Where clover comes in rotation every third year there will be no trouble in keeping humus up to the necessary standard, and in addition the supply of nitrogen will be greatly increased.

Where a fanmer is growing early maturing crops, as truck gardeners do, large amounts of soluble nitrogen are required in connection with potash and phosphoric acid, but the man who is interested in general, mixed farming or dairying, and who uses an up-to-date rotation, sowing clover every third or fourth year, will have little need for nitrogenous fertilizers. The clover sod and manure will supply the nitrogen and humus, but he will need liberal applications of potash and phosphoric acid. These materials are supplied most readily in a commercial form by acid phosphate and muriate of potash.

A good application is 300 to 500 pounds an acre of a mixture composed of one ton of muriate of potash to three tons of acid phosphate, or the same amount of a ready-mixed fertilizer, known as "10-8," which contains 10% phosphoric acid and 8% potash. An application of this kind of fertilizer will stiffen the straw, give a plump, hard berry and a greater weight per bush, as well as increase the yield to the acre. It will also assure a catch of clover, and when a good clover crop is obtained a profitable yield of grain is sure to follow.

In deciding upon the quantity or character of the fertilizer to be used, the farmer should not follow any given formula blindly, but carefully experiment on his own farm until he has decided just what combination of fertilizer will yield him the greatest profit.

Fifteen Farms Wanted.

Box 187, Sussex, N. B.,
Feb. 1st, 1910.

EDITOR MARITIME FARMER,
Sussex, N. B.

DEAR SIR :—In a recent issue of your valuable paper, I advertised my farm for sale.

It will be of interest to you to know that the single insertion brought me no less than sixteen enquiries from different parts of the provinces.

A number of the letters showed that not only had your paper a good circulation, but that it was more widely read than subscribed to.

The small amount spent for the sale of the farm was the cheapest method I could employ to gain this end, and evidently reached the people interested in farms and farming.

I am, yours faithfully,
HAROLD D. BUCHANAN.

EDITOR'S NOTE.—The ad. referred to cost $3.00, and as is shown by Mr. Buchanan, there are still fifteen of our readers, who are ready to buy farms. Have you a farm yon wish to sell? If so, try an ad. in the FARMER.

Changes in the Soil.

EDITOR THE MARITIME FARMER:—

The observing tiller of the soil will notice that as his farm grows older a change is taking place in the physical character of his land. Especially will he notice this change where grain crops have been continuously grown for a period of 15 or 20 years, and where the soil has had neither clover nor stable manure with which to hold its youth. As it grows older he will notice that it inclines more to be lumpy and crusty, is not as lively as it was when new. When a handful of this old soil is compressed, it is found to be not as elastic as the new, and when let go of, it does not spring apart and fall to pieces as it did 20 years ago. The fine, floury substance that works out of it when rubbed between the thumb and fingers is not in evidence as it was.

Why is this and what is the cause of the change? Nothing more nor less than the soil wearing out, simply getting lean. The humus or mold, that was for ages accumulating, is becoming exhausted. It has been worked out, washed out, and sucked out by the growing plants. This is not to say that the plant food has been used up, for the chemist tells us there is plant food in the soil sufficient to last for hundreds of years, but we cannot get it all out at once. It is what he calls unavailable food, the plants can't get hold of it. He also tells us that nature is provident in doling out her fertility. She gives it out slowly from year to year, and thus provides that man shall not rob the soil of all of its fertility in his own generation.

She permits him to take it out in abundance for the first few years after the virgin soil is opened up while there is a surplus. She makes an exception while he is getting started, building his home and equipping his farm, but in a little while this mold, this humus, the very essential in plant building, begins to grow less from year to year. The available surplus has been exhausted, and there will hereafter be a supply of food for the plants only as the elements of nature dissolve them and make them available, as the sun, rain and frost unlock fertility, which one year with another will be barely enough to grow very poor, or at least, ordinary crops. In time, it becomes necessary to depend upon commercial fertilizers to stimulate that chemical action of the soil, that liberates plant food, to hurry it up as the whip does the tired horse. This will force the soil to yield up its fertility faster, but at last there comes a limit, and it becomes necessary to go back and rebuild the soil in nature's way, by returning that which has been taken out, turning under green crops, filling it with clover roots and covering it with manure. This is the most expensive way, yet the only way as a last resort.

The eastern and old country farmers have learned this lesson by hard experience, and they know that the longer the day of replenishing is put off the more difficult it is to rebuild this run-down soil. It is like attempting to renew youth in an old man. There is but little on which to build.

F. W. A.
N. S.

Culture of Roots for Stock Feeding.

"The Culture and Varieties of Roots for Stock Feeding" is the title of a bulletin recently gotten out by the Cornell Agricultural Experiment Station. The work is based on the results of from two to three years' experiments in the growing of different varieties of roots most suitable for stock feeding under New York conditions. As regards cultural methods the work is general and adapted to any locality where roots can be grown.

Following is a summary of the report:

The seeds of root-crops are small and consequently are not capable of overcoming adverse soil conditions. A mellow well fitted seed bed with an abundant supply of moisture, but not wet, is essential. The land should be plowed deep in order to give the long-growing roots a chance to expand in the soil. Moreover, deep plowing insures a more uniform supply of moisture in the growing season. After the clods are subdued, the last fitting should be made with a light straight-disc harrow or planker in order to put the surface in garden-like condition.

Lime is almost always advantageous on soils planted to roots, especially for those of the beet type. Lime modifies the soil texture and corrects possible acidity. The quantity applied should be in the neighborhood of 2,000 pounds per acre. It should be reduced to a fine powder, either by slaking or by pulverising, and worked in at the last fitting.

The germination power of many of the seeds on the market is very low; thus it is important that all seeds should be tested before planting. The germination power of the beet type of root-crop seeds varied from 73 to 185 per cent., and that of the other root-crops varied from 15 per cent., in carrots to 96 per cent. in a variety of kohlrabi. This factor of low vitality is often responsible for poor stands and poor yields. Moreover, seeds of low vitality may increase the cost of good seed greatly.

The plants should be thinned before the tops become crowded, otherwise their growth will be spindling and the root system will not develop properly. If their development is checked at this time, the injury will be permanent.

A marked increase in yield of root-crops has been secured by rotation with other crops. In 1904 there was a gain of 24 tons of fresh substance with 3 tons of dry matter per acre in favor of the rotation. Rotation has been found to be very efficient means of restricting the spread of fungous and bacterial diseases, especially leaf-spot in mangels and sugar beets, and club-root, brown-rot and soft-rot in the cruciferous crops (as turnips and kohlrabi).

Early sowing is essential to a high yield of both green and dry substance. Corn and root crops moy be planted at about the same season; although, if rush of work prevents, the rutabagas and turnips may be planted a little later without much detriment to the crops. Early planting insures a long growing season and also takes advantage of those factors of the season, such as moisture and temperature, that favor root development. On the other hand, early planting increases the amount of cultivation to kill weeds.

When moisture and temperature conditions are optimum, shallow planting is to be recommended. Seeds of the beet type may be sown three-fourths to one inch deep; all others between one-fourth and one half-inch deep.

Cultivation should begin as soon as the rows can be followed. Cost is one of the most important factors in the economy of root-crop production; and labor in thinning and cultivating is one of the most important elements of this cost. Therefore, it should not be so much the object to produce high yield per unit of area as to produce a maximum yield per row. Wide rows, permitting the use of machinery and improved culture methods, are means to this end. If the stand is good, a weeder may be used for the first cultivation, driving across the rows. Shields should be used on the cultivators to prevent the soil being thrown against the young plants.

Shade Trees About Pasture Fields.

Live stock in the fields need protection from the hot rays of our blazing July and August suns; yet how few farmers upon our bald pastures have ever thought of putting in a few clumps of trees about the fence lines. From the standpoint of the comfort of the animals it would be a humane thing to do, and it should pay well besides. Away back as far as 1640 we find that the town of Hingham, Mass., passed a vote that "From the date hereof thenceforth, there shall be no tree or trees cut on the highway upon the pain of twenty shillings, because all good trees are to be preserved for the shading of cattle." More than 250 years have passed since this humane order was adopted, and we are supposed to have advanced in civilization, and yet there are not many in this country who have exhibited as much thoughtfulness for the summer comfort of their cattle as was shown by the men who passed this old piece of New England legislation.

HORTICULTURE

Fruit Growing in New Brunswick.

Fruit growing in New Brunswick was given an impetus Wednesday that will do much to put it on a commercially successful basis. The Agricultural Committee held a large and enthusiastic meeting and much of the time and attention was given over to a discussion of apple growing and the best means to be adopted to enlighten the farmers of the province as to the possibilities, financial and otherwise, along this line. A number of practical resolutions were adopted, one recommending to the department the advisability of taking over the supervision of a number of old orchards and demonstrations what can be done with them when intelligently managed according to modern methods; another recommendation was the premanent displays of fruit, grains and vegetables be placed on exhibition in prominent centres; and another recommendation was that a large Provincial Fruit Show be held next November at St. John.

Mr. Turney, the Provincial Horticulturist, was introduced by the chairman and he delivered an address replete with valuable information and practical suggestion. He said that in the development of fruit growing in New Brunswick there were several things he regarded as essential at the outset. First, each farmer should be impressed with the idea that he should raise all the apples and other fruit required for home use. There was no good reason for any farmer in this province having to buy apples for his home use. Every farmer can raise all he requires, and this was one of the things he proposed giving attention too. Secondly, was the demonstration of the commercial possibilities of orcharding in New Brunswick. This could best be accomplished through the New Brunswick Fruit Growers' Association. In the past considerable of value has been done by this Association in a small way but it was now proposed to reach out for larger things. It is suggested that a large and representative Fruit Show be held at St. John next fall, before the close of navigation, so that all parts of the province can be represented and at that show to give a practical demonstration of what the province is capable along the line of apple growing. In connection with the Fruit Show it is proposed to hold a three days's convention of fruit growers A third requisite which appealed strongly to him was the renovation of the old orchards. Nothing was more discouraging to the young farmer who was thinking of going into fruit culture than to see some of the old and run down orchards of his neighbors. He felt that the early efforts of the Department should be given to instructing the owners how to bring these unprofitable orchards up to a state of commercial productiveness. In this connection he suggested that the Department be authorized to take over the management for a few years of some of the old orchards for experimental purposes. The planting of new orchards was the fourth essential of successful fruit growing. He felt that the Department would not be justified in encouraging the setting out of new orchards until the commercial possibilities of those now growing have been demonstrated. His work in Ontario last year was wholly in the older orchards and in assisting the farmers to bring their fruit up to a state of productiveness Mr. Turney gave statistics showing what had been done in the Ontario county alone in the past few years by co-operative effort and through the instrumentally of the Fruit Growers' Association. A few years ago 3000 barrels of fruit suitable for export was the record for the county. Last year 19,000 barrels of apples were exported from those same orchards, showing what can be done by intelligent and co-operative effort. There are very large areas in New Brunswick, particularly the St. John Valley, splendidly adapted to apple growing. Another thing which Mr. Turney thought demanded attention was the kind of nursery stock which is being sold to the farmers of New Brunswick. On account of the small and haphazard was in which the farmers of this province are buying their young trees they are getting only the scrub stock in most cases. He thought the Department might well turn its attention to this matter and get the nursery stock in large quantities and of very best varities for our conditions.

Mr. Labillois, ex-Commissioner for Agriculture, said he had been very favorably impressed with what Mr. Turney had said, and he felt that every member of the Committee would agree that he was a man who knew his business. He felt that the Department of Agriculture would have the unanimous support of the legislature in adopting any practical methods to improve the old orchards of the province and also to provide the fruit grower with better nursery stock.

Appreciative remarks were made by Mr. Woods, Mr. Hartt and Mr. Pinder, each emphasizing the importance of demonstrating to the world and to our own people the great possibilities that await the successful fruit grower in this province.

The following resolution, moved by Mr. Woods, seconded by Mr. Hartt, was unanimously adopted :—

That in the opinion of this committee, the Department of Agriculture would be justified in taking over, by lease or otherwise, a number of the older orchards in various parts of the province, and demonstrating what can be done in making a commercial success of fruit growing.

Mr. Dickson brought up a matter and made a suggestion that met with the unanimous support of the committee, and that was the importance of having a representative display of fruit and grains and such vegetables, as are practicable, placed in the Departmental Buildings at Fredericton, for the inspection of visitors, and, if found feasible by the Agricultural Department, to also have a similar display at the Immigration Rooms in St. John and at the Agent General's Office in London.

Mr. Dickson said that every visitor to the province, if he can be induced to come to Fredericton, is taken to the Departmental Buildings, and is there given, as he supposes, a comprehensive idea of the resources of the province. He is shown specimens of the minerals of the province; he is pointed out the variety and beauty of the birds and wild fowl; and he is impressed with the size and fierceness of the bears, the majestic beauty of the "Monarchs of the Forest," and looks with curiosity and interest upon the beavers and snakes, the foxes and deer, the trout and salmon, and is impressed with the pleasures of camping and canoeing and hunting, as depicted in the many lovely photographs hung upon the walls of the buildings. He is even shown something of our great forest wealth, as exhibited in the specimens of native woods; but what is there in the whole building to give a visitor an idea that New Brunswick is an agricultural and fruit growing province ? He does not see even a modest display of fruit or grain nor a photograph of some of the fine farms of this country.

It was quite true that these other things are valuable and have doubtless resulted in much good to the province; but, after all, the visits of the sportsman are only transitory and the wealth left in our province by the anglers is but insignificant in comparison with what might be accomplished if these visitors could be interested in our agricultural development. Without, in any way, disparaging what has been done and is being done by the Department and by the Tourist Associations to make the hunting and sporting attractions of New Brunswick known abroad, he thought that the Agricultural and Horticultural Departments might well push the farming possibilities to the front.

He suggested that a display of apples and other fruit raised in the province be prepared by the Provincial Horticulturist and placed on permanent exhibition in the Departmental buildings, be given just as much prominence as are the specimens of game and fish, woods and minerals, hunting and fishing scenes, which have proven so attractive to the visitor. He believed that the Horticulturist was at the present time preparing an exhibit of fruit for a National Exhibition to be held in Berlin, and he thought it would be a good idea for a duplicate of that display to be arranged for home consumption.

And in this connection Mr. Dickson thought a similar display ought to be on exhibition at the rooms of the Superintendent of immigration at St. John and that display should include not only apples and fruit but grain, in the stalk and threshed, such vegetables as can be preserved for such purposes, views of farm life and farm homes taken in various sections of the province; in fact everything and everything that would give the visitor or immigrant an intelligent and comprehensive knowledge of the agricultural and horticultural possibilities of the province. He was sure that the expense of collecting and arranging such a display could not be very great, while the expense of upkeep would be practically nothing; while as an educative feature he felt certain that the results would be very far reaching and of great permanent good.

The suggestion of the chairman was favorably spoken to by several, and the following resolution was moved by Mr. Labillois, seconded by Mr. Allain and adopted :—

That the Horticultural Department be recommended to prepare a comprehensive display of fruits, grains and vegetables, of the province, and have such displays placed on permanent exhibition at the Department at Fredericton, at St. John and at the Agent Generals offices at London, and other places thought to be of advantage to the province.

Deputy Commissioner Hubbard expressed his conviction of the great possibilities of apple growing in New Brunswick. The Nova Scotia orchards netted their owners one million dollars last year, yet in this province we have ten times the area specially adapted to apple growing that they have in Nova Scotia. He believed that it would be well for the fruit growers of this province to specialize on varieties best adapted to our conditions. The Montreal district had specialized on the Fameuse apple and that apple is selling in London at about ten cents each, yet we in New Brunswick can raise successfully a better quality of Fameuse than is grown in Quebec. The same is true regarding the McIntosh Red, which is selling in New York at $10.00 a barrel. The west had specialized on apple growing and today apples from the west are selling on the Boston market at $5.00 a box of less than one hundred apples. He thought the proposed fruit show in St. John would do much to stimulate apple culture as a commercial enterprise.

It was moved by Mr. Hartt, seconded by Mr. C. M. Leger; Resolved, that in the opinion of this Committee arrangements should be made to hold special fruit exhibition in the city of St. John next November to demonstrate what can be done in the production of fruit in this province upon a commercial scale.

The subject of commercial fertilizer discussed at previous meetings of the committee, was also discussed further. On the recommendation of the sub committee to which the question had been referred, it was decided to ask the Department of Agriculture to further pursue its investigations during the present year, and if possible, work out a scheme for the importation of the chemical ingredients in large quantities and the distribution of same among the province.

E. J. P. Fredericton, N. B.

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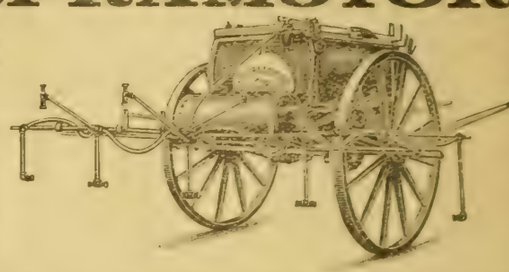

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SEE THE NEW SPRING AND SUMMER CATALOGUE, PAGE 223

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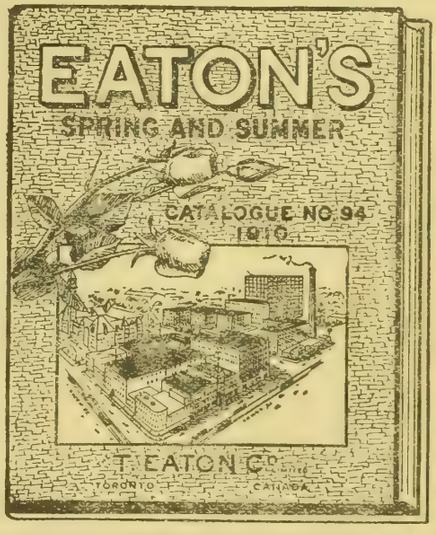

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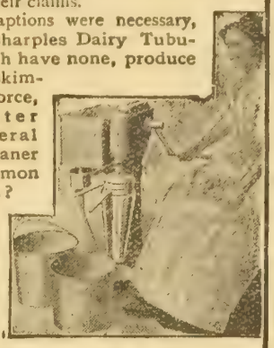

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The Renovation of Old Orchards.

EDITOR MARITIME FARMER.

Is my old orchard worth renovating is the question uppermost in the minds of many farmers to-day. In reply, I would say that if the trees are not more than thirty-five years of age, have not been allowed to develop their bearing wood too high up, and are not too badly broken, through disease and neglect, the task of putting them in a profitable condition is comparatively simple. Undoubtedly, there are some orchards in the province, which, although they have never received any care, being covered with moss and lichen, are yet strong, thrifty and in a condition to yield handsome returns, under proper treatment. To renovate such orchards proceed as follows :—

1. Remove all dead and broken limbs, taking care to leave as neat and short stubs as possible. Prune, but not too heavily at first, removing enough limbs to admit the entrance of sunshine and circulation of air to the centre of the tree. Work as far as possible from the outside of the tree. This work may be done in March, or the first two weeks of April. Do not attempt to take out all the wood that should be removed, in one year, but content yourself with removing one-half the first year and completing the thinning out operation the second spring. Coat all large stubs and wounds with a heavy white lead paint, to which has been added enough green paint to color it.

2. The trunks and main limbs of neglected trees will be covered with shaggy bark, moss and linchen, which furnish a beautiful winter home for insects and spores of fungous diseases. To remove these, the trees should be well scraped. A short handle fitted into a small hoe, or better still, into a small triangular shaped hoe, makes a very efficient implement for the work. Spraying will be made much more effective when the trunk and main limbs of the trees have been rid of their rough covering and the surplus limbs thinned out.

3. Spraying must be systematically and thoroughly undertaken. It would be well to spray first before the growth starts, using the following solution : Concentratad lye, 1 lb.; lime, 30 lbs.; water, 40 gallons. Slack the lime, make up to 40 gallons with water, and then add the lye, straining through a fine mesh before using. This solution will successfully combat the oyster shell scale and help to remove old bark, moss and lichen. Succeeding sprayings with Bordeaux mixture and an insecticide should be applied as per spraying instructions given below. Thorough and systematic spraying, kept up for a few years, will overcome the results of neglect.

4. In many old neglected orchards the soil is very poor and run down, having been depleted of much of it's plant food. We must, therefore, endeavor to build up the fertility of the soil. There is nothing better for this purpose than well r tted barnyard manure. Apply a good top dressing in the spring, and turn under shallow. If the sod is not too thick and tough, it might be worked up with a disc harrow instead of ploughing.

5. Improve the physical condition of the soil by the adoption of cultivation wherever possible. After the ground has been ploughed in the spring, as above recommended, keep cultivated until the first week in July, and then seed down with a leguminous cover crop —if crimson or red clover is used, sow from 12 to 15 lbs. per acre. This should give a good stand by the fall of the year, check the green growth, ripen up the wood, and help to hold the snow through the winter. It should be ploughed under in the spring, serving as a green manure crop to improve the physical condition and fertility of the soil This completes the first season's operations. Repeat next year with modified pruning.

The first season's work will result in increased vigor of the trees, cleaner, but probably not more fruit. The second season the fruit will show a decided improvement over that of the first year, and in the third year, but not until then, you may expect the orchard to be in a good condition and to bear heavily.

Remember the results cannot be accomplished in one year only, but there will be improvement each year, if you do the work thoroughly. The treatment outlined above has never failed to bring satisfactory results, where properly applied. It is useless to undertake this work unless you are prepared to exercise care, patience and thoroughness in all the operations.—A. G. TURNEY, Provincial Horticulturist, Fredericton, N. B.

The N. B. Provincial Horticulturist in Harness.

Mr. A. G. Turney, Provincial Horticulturist, spent three days, March 3rd, 4th and 5th, in Charlotte County, under the auspices of the St. Andrew's and St. Croix Farmers' Institute. Demonstrations of pruning and grafting were given in the illustration orchard at Waweig, on Thursday afternoon, and in the orchard of Mr. Lawrence, at Bayside, on Friday afternoon. Evening meetings were held at the manse, Waweig, and at the Beeverhill schoolhouse, at which Mr. Turney spoke on the improvement and establishment of home orchards, and on strawberry growing. He urged the advisability of local farmers capturing the profitable summer market for small fruits in the neighborhood of St. Stephen and St. Andrews, which market, up to the present time, has been supplied from Montreal. On Saturday morning Mr. Turney visited some orchards in the Beeverhill section and advised their owners as to treatment, and in the afternoon he pruned the illustratation orchard of Mr. W. E. Armstrong, at Waweig. Considering the unfavorable weather, the meetings were well attended, and considerable interest manifested.

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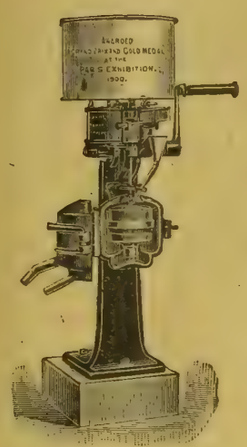

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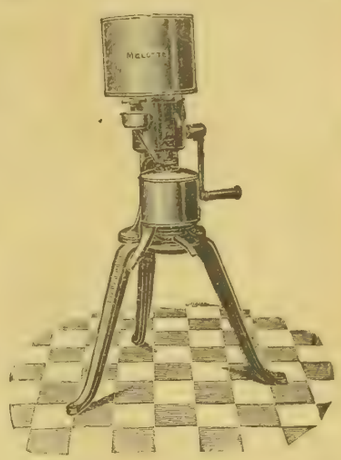

R. A. LISTER & CO. Limited, 62 Stewart Street, TORONTO.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Value of Salt for Milch Cows.

It has always been my advice to owners of farm stock to place salt where it can be conveniently got at by the animals. Salt should enter at all times into the food of the dairy cow, and it should be kept where she can partake of it ad limitum. Both the quantity and quality of milk are considerably affected by withholding salt till the cows get hungry for it. Cows in the season of lactation require more salt than at other times, and the cows that give most milk require most of it.

Sodium chloride, or common salt, is very widely distributed in both the animal and vegetable kingdoms, and being a normal constituent of nearly all animal organs, and fluids, undoubtedly plays an important role in the process of nutrition. Such being the case, it is essential that an adequate amount of salt be obtained either in the food consumed, and water drunk, or as a direct addition to the ration. The food and water always contain some salt, but the amount varies widely in different localities, and is rarely sufficient to satisfy the desires of an animal, so that more will not be taken if offered. When allowed free access to salt, cattle will consume from one to eight ounces daily—the last amount is, however, rarely reached, and the average amount would probably fall below three ounces. In general, it has been observed that cattle having free access to salt have a better appetite, and are less affected by changes in the ration than those receiving no salt except that contained in the food. It is claimed that milch cows require more salt than other cattle, and that if it is withdrawn there will be an immediate and decided falling off, both in the yield and in the quality of milk. The trials that have been carried out agree in the following particulars. Cows having been deprived of salt for two or three weeks exhibited an abnormal appetite for it, but the health of the animal did not seem to suffer for a far longer period. This period of immunity varied with individual cows from less than one month to more than one year. In every case there was finally reached a condition of low vitality, in which a sudden and complete breakdown occurred from which recovery was rapid if salt was supplied. The breakdown was most likely to occur at calving, or immediately after, when the system was weakened and the flow of milk large. In general, the cows giving the largest amount of milk were the first to show signs of distress. It seems probable that a dry cow or a steer would suffer no great inconvenience if given no salt except that contained in their ration. The uniform results obtained from the cows in the trials I am quoting indicate beyond question that salt in addition to that contained in the food is absolutely essential to the continued health of a dairy cow while producing milk. It is evident, moreover, that the amount of salt which must be supplied directly will vary greatly in different localities, it being more at high elevations and at places remote from the sea.

W. R. GILBERT.

Lessened Production.

"August records received at Ottawa from members of cow testing associations indicate that in most districts the flow of milk is well up to the average. In some localities there is but a very slight decrease from July yield of milk, so light, that the increasing richness shows a trifle higher yield of fat.

"In other localities, unfortunately, there is a very marked shrinkage, as much as 120 lb. and even 180 lb. milk per cow less than in July. Many dairy farmers have accordingly vowed that next year will not see them caught without any provision for maintaining the flow, but they have determined to provide some soiling crop, and if possible build a silo, so as to ensure succulent feed for probable hot spells in July and August. Such men are wise.

"Some districts have as high averages as 870 lb. milk, and 29 lo. fat in August. Such wise dairymen had made provision of suitable feed. Others, less provident, had to be content with a yield of 580 lb. milk and 21 lb. fat per cow; while here and there the average yield was down to 390 lb. milk and 16lb. fat. Such men might well copy the methods of their brother farmers who regularly secure the larger yields. Selection of the best cows can be made intelligently when records are kept of each cow."

The foregoing announcement, issued last September by the Dairy Division, Ottawa, contains a note re the providing of succulent feed for our dairy cows during the season of short pasturage. It is not too early to plan for next summer's soiling crops. When ordering your other seeds do not neglect seeds to be sown for soiling crops, and get them into your soil as early as conditions will permit.

DAIRYMAN,
Pictou Co., N. S.

To the Interest of Every Factory.

The question of supply of raw material to the cheese factory and creamery is a first consideration; the finished product is paying quantity and of good quality is mainly dependent on a large supply of good milk and cream.

As the supply is also of importance to every director of any dairy company, every factory owner and every maker, such men should see to it that each patron is interested in cow testing. Once a patron begins testing each cow individually he commences to take a far more interest in the herd generally and is likely to supply not only more milk and cream but far better quality, and cared for better. In many herds the milk yield has been increased by twenty and even thirty per cent in three years through a knowledge of each animal's capacity, which led to weeding out the poor cows and feeding the good ones a little better. Is it not to the advantage of every factory to see its patrons properous? If farmers supply more milk or cream from a given number of cows, or from a certain number of acres, it means that the factory receives more raw material from the same territory, thereby lessening the cost of hauling, and lowering in proportion the expense of making, while a longer factory season is possible as the milking period is extended.

Factory officials are invited to recommend cow testing to all their patrons. If a list of names and addresses be sent to the Dairy Commissioner, Ottawa. literature on the subject will be mailed direct to each.

C. F. W.
Ottawa,

Straining Milk.

Mr. I. C. Weld, in a paper on the lessons of milk and cream contests says: "One of the things that occurs to me is that on farms where milk is produced, as one inspects the barn and the various details which enter into dairy work, some dairymen take particular pains to tell you how many thicknesses of cloth they strain their milk through. It is a good thing to strain milk, I am not saying a thing against it; but do you realize that if there is any dirt in the milk it is almost impossible to strain it out? And don't you know it will be a great deal better if you can tell visitors to your farm how painstaking you are to keep the dirt out of milk rather than how painstaking you are to strain it through six or eight thicknesses of cheesecloth?

LIVE STOCK.

Warding off Sheep Troubles.

Now about prevention: Scientists may proclaim that sheep pastures will not become infected with worm embryos. They cannot survive the winters of the northern states they tell us. But practical shepherds and farmers know, by experience that they can't safely pasture any one field with sheep more than one, or at the extreme, two years without there being some sheep in the flock manifesting symptoms of worms; and if, by force of necessity, pastures must be used for sheep year after year, the sheep must have some remedy constantly ready for them to instinctly help themselves to.

I don't think, after much study and experimentation, that there is any one remedy that will protect a flock constantly exposed to infection, for sheep, in eating the blades of grass, take the eggs of worms into their stomachs. But I do think that if a box of salt is kept covered in some place frequented by the sheep to help themselves to, and if said salt is saturated with spirits of turpentine in proportions of a gill to every four quarts of salt it will wonderfully help to keep the worms from multiplying.

It is well also to have another box of larger size, where sheep can help themselves at will, filled with tobacco stems. These stems should be cut up in inch lengths and from time to time a quantity of wheat bran should be put on top of the stems. When this is done the sheep soon instinctively learn to use tobacco and no young intestinal worm or stomach worm, expect the tapeworm, can stand the diet. This will not kill mature worms. It will only prevent the worm family-multiplying to the extent of injuring the health of the sheep.

But no sheep owner should feel wholly satisfied by preventive treatment of stomach worms. Twice a year the whole flock should be drenched with some agent which will destroy the mature worms. There are two very very inexpensive drenches which will quite effectively do this. The one is gasoline, the other coal tar creosote. The objection to gasoline is that it needs to be so very carefully used or sheep will be killed by it. The dose is one tablespoonful (never more at one dose) to a mature sheep; mix with not less than four tablespoonfuls of raw linseed oil (never boil it); then add a half pint of sweet milk. In giving, set the sheep upon its haunches and shake the liquids well together until the last minute it is administered, or the gasoline will separate, and if it enters the stomach in an unmixed form it will seriously injure and may kill the sheep.

There is no direct vermifuge that will as effectually kill all species of worms in sheeps stomach and intestines as will gasoline; yet the coal tar cresote or the more refined class of sheep dips will, if given after a full twelve-hour fast and before the flock is turned to pasture in the spring, and again about November, destroy a large number of the mature worms. All lambs born in April or May should be drenched about August or September following, to be certain of ridding them of worms that may later cause their death. The dose of any of the creosotes named is a desert-spoonful mixed in a full half pint of water. This is perfectly safe to give when given as advised. The minimum dose will be just as effectual and the the owner is always safe from loss in sheep by over-dosing.

The keeping of sheep by the thousands on the great western ranges will soon be over. The numbers are too great for the owner to give them necessary attention. It is the small flock owner who is able to become familiar with practically every sheep in the flock; as he yards them or goes to the field among them he can, at a glance, note as to whether any are dropping or not, or not thriving as well as they should. In the future it is to be the small flock, one hundred or less, well looked after, that will supply the demand for wool and mutton.

Brood Sows.

A recent writer in Breeders' Gazette in discussing the hog question, gives the following remarks on the care necessary for brood sows:

When hogs are selling for 8 cents per pound live weight the farmer cannot be too careful of his breeding herd. If one wishes to have large healthy litters of pigs for next year's market one must provide one's brood sows with a mixed ration. Corn alone does not provide a sufficient feed for the brood sow, yet because it is handy, plentiful and comparatively cheap it is fed lavishly on the majority of farms. Its indiscriminate use results in "back luck" at farrowing time

Experiment stations advise the feeding of clover or alfalfa hay and skimmilk or buttermilk, and while there can be no question as to the value of these feeds few farmers in Illinois who keep 40 or 50 brood sows can feed any except clover hay to advantage. On many farms milk is not plentiful enough to balance a ration for a number of sows and one is obliged to have recourse to something else to supply the required amount of protein. Writing from personal experience we have had splendid success in feeding old process oilmeal and shorts where a large number of sows are kept. These feeds are mixed as a thin slop and a good feed given every other day. When rye or inferior wheat is on hand it is ground and used instead of shorts. We fed oilmeal as indicated last winter and 20 sows averaged 8 pigs to the litter, and not a dead pig at farrowing time. In the summer the herd was attacked by cholera, yet as all the old sows were in prime condition after weaning their pigs none of the sows died. If sows are carried in good condition on corn alone they never farrow satisfactorily

Of course judgement must be used even in feeding oilmeal, as too heavy a feed, especially at the start, would likely result disastrously. Cottonseed meal should not be confounded with oilmeal, as the former should never be fed to brood sows.

A few years ago we built a hoghouse for the use of brood sows before farrowing, something in the style of a horse barn. Stalls were built 8 feet apart and all stalls were well bedded The sows would lie two and three together in each division and never crowded, even in the coldest weather. When a large shed is used, undivided, hogs are certain to over-lay and this condition should be guarded against. Each morning in winter if the weather is not too severe the sows are turned on a twenty acre bluegrass pasture and allowed exercise all day. There is no trouble in exercising the Duroc-Jersey hog, but when the Poland-China are in the herd it is advisable to fasten them away from the hog-house during cold weather.

The farmer who gives his breeding herd even moderate care is usually successful while the herd that is allowed to care for itself is sure to be a disappointment.

The Flock in Winter.

It is now winter, Nature has asserted herself once more. Pastures are a thing of the past, being covered so deeply that not a turf or bunch of grass can be seen. There is nothing there to induce sheep to work for, so we must use some means whereby they can be exercised, especially the breeding ewes. This may be done by driving or by feeding in roomy yards, spreading hay, so as to induce them to exercise themselves while feeding. This works very well, and while they are out for a few hours, except stormy days, the rack may be filled ready for their return at night. They will wend their way home quietly and take their exercise in a natural way, while in driving them one is apt to get in a hurry.

They come in with an appetite ready to devour their clover hay, oats, bran and oilcake, and as the shepherd says, "Hungry enough to eat the boots off your feet." They are out every day except wet, or very stormy. Plenty of fresh air add pure food and water with healthy sheep, a dry bed free from draught, is all that is absolutely necessary to make mutton. The remainder depends upon the shepherd. The eye of the feeder is his guide.

The ewe flock must necessarily contain ewes of various ages, old and young strong and weak. The strong ewes will require nothing but good hay, pure water and exercise, until a month prior to lambing; then they should have a little grain once daily. A good ration of oats, bran and oilcake, minced equally by weight, has proved very good with us. The thinner ewes should have better care. If crowded for room put them with the ewe lambs. Feed grain at least once daily. A pound per head of the above mixture will be sufficient, and a small feed of oats, mangels or Swede turnips at mid-day will be eaten with a relish and with good results. I would not advise feeding roots in zero weather unless one has very warm quarters and then I do not believe in too many, as they contain a great amount of water, which in cold weather is not required; in fact, is detrimental. Save them until the

KING BUG: "WELL BOYS! I KNEW SOMETHING FEARFUL WAS BOUND TO HAPPEN WHEN I HEARD THE CANADA PAINT COMPANY WERE SHIPPING THEIR PARIS GREEN TO THESE PARTS."

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New No. 81 Planet Jr Horse-Hoe, Cultivator and Furrower is a great implement for cultivating and hilling crops up to 4 feet apart. Compact, strong, and steady-running. Does just the kind of work you want.

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warmer weather in the spring when the appetite needs a little encouragement. A few roots fed then will be found very advantageous, not only as a factor to increase the milk supply, but as luxury and a change of diet. They are cooling to the system, and more grain may be fed in connection therewith than without.

Close observation and a little common sense are the most essential qualifications of the shepherd. You will always find the shepherd who is continually having hard luck is the one who never has time to do anything properly. To be a good shepher requires as much thought and careful attention as any other vocation known to mankind.—Shepherd's Journal.

Co-Operative Breeding.

Co-operative breeding, as viewed by a writer for Orange Judd Farmer, gives promise of great achievement in the future. As at present carried on much of our breeding is done in the dark. Unworthy sires are used. Breed is almost entirely ignored.

If a community will form an association, study the breeds; and carefully select the breed they like best, and is best suited to their conditions, and that they will be willing to stand by ever after, when they will have laid a sure foundation for future prosperity.

This much we know, that when an association is formed interest is aroused, and a desire for better things is inspired. Full-blood sires are bought, and if a man feels too poor to buy a good animal alone, two or three will go in together and buy. As good sires are bought, exchanges are made, so a choice animal can be kept near the same locality during the entire period of his usefulness.

Particular emphasis is placed upon the character and efficiency of the secretary: The secretary should be a live business man, be in touch with every member. he should know what stock each one has, and what he desires to have. Through him exchanges are made, buyer and seller brought together. When they have stock to sell he carries advertising for the whole association, thus lessening the expense. He should have the registry books of the breed, so a prospective animal can be traced, and its worth determined. When animals are for sale they are reported to the secretary, so a buyer can find out by him just what can be bought, ahd where it can be bought, and a buyer will go to such a place, when he would not go from house to house in the uncertainty of finding what he wanted. In shipping there is also an advantage, as animals can be shipped much cheaper in carlots than singly.

Cow testing associations are apt to follow, friendliness is promoted and speakers may be obtained through the agency of such an association.

Lake Mills, Wis., is noted the world over for its cattle, because breeders have been working together raising one breed. A buyer has larger numbers to pick from, he can buy in large lots, and he can get what he wants, and he is willing to pay the price. This is business; straight, honest, legitimate business. It will give an uplift to the farmer himself, it will bring comforts to his family, and education to his children.

Lice on Hogs.

Hogs often suffer very much from vermin. Lice are introduced from neighboring herds, and the losses in feeding are often severe, especially among young pigs, when death is sometimes a secondary result if not an immediate result. When very numerous, lice are a very serious drain on vitality, fattening is prevented and in case of exposure to disease, the lousy hogs are much more liable to contract and succumb to it. Newly purchased hogs should be carefully examined for vermin and they should not be turned out with the herd until they are known to be free from these pests.

When the herd is found to be badly infested with lice, all bedding should be burned and loose floors and partitions torn out. Old boards and rubbish should be burned. The quarters should then be thoroughly disinfected by spraying with good solutions. After disinfection, as in the case of a disease outbreak, everything about the place inside and out, should be thoroughly whitewashed.

Vermin are most common around the ears, inside the legs, and in the folds of the skin on the sows sides and flanks. In light and isolated cases, they may be destroyed by washing the hogs with an emulsion of crude petroleum or of kerosene or with a stock dip properly diluted, applied by means of a broom. In severe cases, however, especially where the whole herd is affected, thorough spraying or dipping should be resorted to. In this case a dipping tank will be a great convenience.—GEO. M. ROMMELL, Department of Animal Industry, Washington, D. C.

Stock Notes.

Pure-bred seed goes hand and hand with pure-bred stock and is every bit as essential.

The most prominent "catch crop" just now is to catch up with the weeds.

Speaking with a nearby farmer recently, he said that, his da,'s work commenced at sun-up and ended at sundown."

What do you think of the plan, dear reader?

To me, it seems little short of folly;—I can scarcely see the necessity for it, unless it might be accounted for by the fact that the nanagement was very poor.

Excessive hard labor on the farm must certainly be due to rank management and an effort on the part of the farmer to accomplish everything by brawn alone and not use brain at all

There is no reason on earth why a day's work on the farm should not be about the same as it is anywhere else

Industry is not the only thing that is necessary on the farm—if it were, I know of several men who have failed that would have succeeded.

Keeping everlastingly at a thing does not always bring success, in spite of the trite saying that it does.

The more persistantly some people labor the worse off they become, simply because, they are not expending their energies in the correct way and along the most profitable line.

The Importance of the Tuberculin Test

If there were no state laws, no city ordinances, requiring the tuberculin testing of cattle, I contend that it is to the interest of every stock owner to apply the tuberculin test in a nice, clean, sensible manner of his own protection.

By applying the test you determine whether or not you have tuberculosis in the herd and the least that can be done would be to remove the tubercular cattle from the herd, or if this were not convenient, move them to one end of the stable, or better still, a partition might be placed between the healthy and infected ones. In this way you would protect the balance of your herd. As I have often noticed, where one tubercular animal is found in a herd, usually the ones on either side become infected sooner than animals further from her, showing that the disease is more apt to be spread by actual contact than otherwise.

Another very important method of preventing and overcoming tuberculosis in cattle is to have a thoroughly ventilated, sunlighted, well drained stable. Owing to the fact that the direct rays of the sun will destroy germs, is a very good reason why at some hours of the day the sun should be permitted to shine on all parts of walls and floors of stables where cattle are housed. If this be impossible the sunlight should be substituted by a good, reliable germ destroyer as it is unreasonable to expect a herd to thrive and do well where the germs of any diseases are present.

DR. DAVID ROBERTS.

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A pound of 40c. Red Rose goes further than any 30c. or 35c. tea and it is distinctly superior in quality.

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Just think, five cups of 40c. Red Rose Tea will only cost 1c. One lb. makes over 200 cups. Not a question of affording.

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HOW LITTLE RAIN-WATER REBELS SECRETLY DESTROY MOST ROOFING

Rain-water is deadly to nearly all Roofing, except *Brantford*. It contains millions of little germs which eat away its very *life*, and you are not aware of this rebellion until Roofing is destroyed. Wood pulp, jute, cotton-cloth, etc., is used as a foundation in most Roofing. It is lifeless, and cannot fight for itself. The refuse coating which does not possess one particle of resistance, is itself injurious to Roofing. Slight bending will produce numerous cracks or open seams, because it is brittle. But the foundation of *Brantford Crystal Roofing* is a long-fibred, evenly condensed sheet of pure *Wool*, which goes through special Saturatory Process, forcing Asphalt saturation through and through, and becoming as hard as flint. This saturated Wool now, alone, is capable of resisting the onslaught of *any* enemy. But to make it doubly durable *Brantford* is heavily coated with weather-resisting, fire-proof Rock Crystals, which require no painting. After going through this process no Roofing Enemy can effect it.

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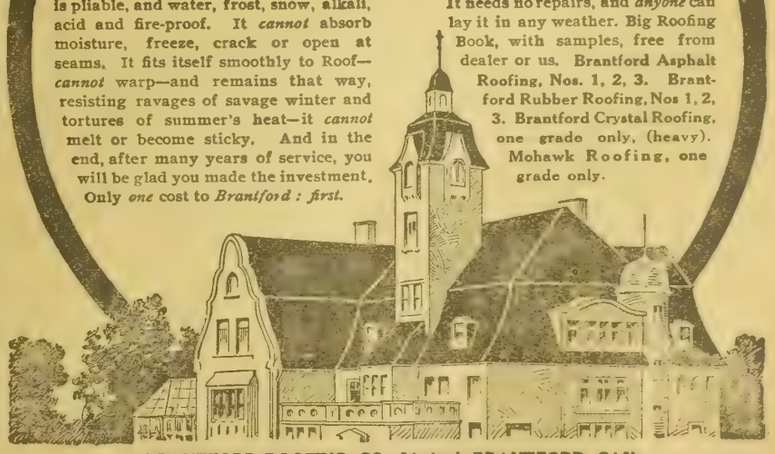
is pliable, and water, frost, snow, alkali, acid and fire-proof. It *cannot* absorb moisture, freeze, crack or open at seams. It fits itself smoothly to Roof—*cannot* warp—and remains that way, resisting ravages of savage winter and tortures of summer's heat—it *cannot* melt or become sticky. And in the end, after many years of service, you will be glad you made the investment. Only *one* cost to *Brantford: first.*

It needs no repairs, and *anyone* can lay it in any weather. Big Roofing Book, with samples, free from dealer or us. Brantford Asphalt Roofing, Nos. 1, 2, 3. Brantford Rubber Roofing, Nos 1, 2, 3. Brantford Crystal Roofing, one grade only, (heavy). Mohawk Roofing, one grade only.



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THE HORSE.

Corns.

A corn consists of an injury to the sensitive horn of the foot and the soft tissues beneath, causing at the same time a rupture of the same blood vessels. The escaped blood works through the horn of the sole, staining it a dark red color. The location of a corn is on the sole in the angle formed by the bar and wall of the hoof. The front feet are most usually affected, because they support about two-thirds of the weight of the body and, also, during movement, the heel of the front foot is placed upon the ground first. Three kinds of corns are generally recognized. The dry, moist and suppurating.

The dry corn is recognized by the blood-stained horn and is not attended with excessive inflammation.

Moist corns are recognized by the large amount of inflammation, shown by the fluid accumulating in the region of the corn.

Suppurating corns are the moist corns which have become infected with pus germs.

Among the causes and conditions which predispose of corns may be mentioned to excessive thinning of the sole in the region subject to corns; high heels; too much removed from the frog and bars; too short shoes, which allow the foot to project over the heels of the shoe, thus giving no support to the structures above; wide feet with low heels are easily bruised, causing corns; allowing shoes to remain on the feet too long; a shoe improperly applied to the foot so as to rest upon the sole and bruise it.

SYMPTOMS OF CORNS · The dry corns usually go unnoticed. The first symptom of a moist or suppurating corn is pain. In many cases of corns in old horses the corns have existed for such a long period that the animal has become accustomed to the slight pain. However, they are restless and may paw their bedding behind at night. Sometimes the first that is noticed that may arouse suspicion of corn is that the the horse will not travel as freely as usual. Then lameness develops, which will not improve by exercise. While standing, the affected foot is advanced so as to relieve it of all weight. When a suppurating corn exists the lameness becomes severe. The hoof over the horn is hot and painful upon pressure. If a suppurating corn is neglected, pus may be seen escaping at the top of the hoof. With a suppurating corn a horse suffers the greatest pain just before the pus escapes, then goes sound after the pus is removed; lameness returns with accumulation of pus.

TREATMENT OF CORNS.—Whenever possible, remove the cause of the corn. The sole should be examined thoroughly to determine the extent and nature of the corn.

If a suppurating corn is present all the sole under-run with pus should be removed. Then apply a pack of 1-1000 bichloride and keep moist with this solution for three or four days. Then pack the corn with white lotion for three days. The horse should then be shod with a bar shoe and all pressure taken off the wall in the region of the corn..—C. L. BARNES, Colorado Agricultural College, Fort Collins.

Heaves in Horses.

Heaves is closely related to asthma in the human family. It is attended with difficulty of breathing, and a sensation of constriction in the chest. weezing generally accompanied by a cough. It is a genus of the order of spasmi. It is caused by over feeding in clover, vetches, or luceun, etc., but more particularly on chaff, dry bran and oats, and husky food, a great deal of which has generally to be eaten in order to obtain the requisite percentage of nutriment.

In countries where there is a comparatively short winter, such as in the south of France, Spain and on parts of this continent, in California, it is almost entirely unknown. Heaves is always most invariably observed to exist in proportion as clover is fed, and in order to confirm this statement is to observe that when land heretofore yielding clover has refused to produce it in paying quantities, so that other regimen has had to be supplied, it disappears. It is also caused by animals being left in the stable for several days, and during this time being fed the ordinary quantity of hay which they would have received were they at work.

Dusty hay is a great producer of heaves. Violent exercise, which unnaturally distends the lungs or an hereditary predisposition to the disease, favors its appearance. It has been considered a disease peculiar to old animals, and animals with narrow chests are most likely to be affected with it, as well as phthisis. It would be well to mention some of the prominent symptoms of the disease.

There is a duplex or double motion of the flanks when the air is being expired. There is at first a semi-collapse of the abdominal parietes, or walls. Then after an intervale, which can be easily observed, the object of which is to complete the evacuation of the chest, there is generally a short, dry, weak, slow-sounding cough, a weezing in the throat, with evident manifestations of dyspnoea. This occurs paroxysmally, and is due to violent exercise, the effects of suddenly breathing cold air, or after drinking cold water. There is also, in some patients, observed a ravious appetite, due to probable derangement of the digestive organs. Such animals do not stand work well, as the muscular tissue is soft and easily made to show the effects of fatigue. A close stable is unsuited for any horse, but particularly so for those suffering from the disease we are considering.

Treatment: Turn the animal out on pasture in the season for it. Laxative food, will relieve the complaint. In chronic cases give dry grain at night only, feed turnips, carrots, etc., at other times. The water should be given in small quantities and a little lime occasionally added. Keep the bowels always laxative, to accomplish which feed oilmeal occasionally. Give two ounces of pulverized balladonna once a week and occasionally a dose of hyoscyamus, but you will have to rely quite as much on good care and cleanliness as upon medical agents.—American Horse Breeder.

Income From Brood Mare.

In the spring of 1907 I was offered a black grade Percheron mare for $200. She was large, weighing 1465 pounds, and supposed to be with foal, but as she was well advarced in years I declined the offer.

In June of that year she dropped a fine black filly, and the next two years foaled fine black horse colts. Last fall I gladly paid $200 for the filly, weighing 1390 pounds at two years and five months. The horse colts are conservatively valued at $150 and $100, respectively, making a total of $400 in three years. As the mare and colts have been kept in a rational manner without any pampering, a large share of this sum is clear profit.

The mare was worked regularly during the spring planting, with a fortnights rest proceeding and following parturition. During the summer she had the run of a small blue grass pasture, but no grain. She was not worked regularly, but was used for cultivating corn and potatoes, raking hay, pulling the horse fork when unloading hay, etc.

The colts were weaned at about five months of age, and during their first winter they were stabled and fed hay and about four quarts of oats and bran a day. They were turned loose in a small paddock for exercise on pleasant days. After the first winter they had the run of a large blue grass pasture both summer and winter, with no shelter but a shed open to the east, in which was a large manger always filled with bright mixed hay.

During the summer two-year-old steers are grazed and fattened on this pasture, and great care has always been exercised to prevent close cropping of the grass, so there is an abundance of good winter pasturage for the colts, and they eat very little hay except during deep snows.

The mare runs in the pasture with the colts during the winter season and in the spring is in better health and flesh than in former years, when she was wintered in the barn and was grained and worked regularly.

This method has resulted in the raising of large, robust colts, full of vitality and constitutional vigor, at a minimum cost. In this way many an old mare will prove a mine of profit for her owner, provided she is of the proper type and size to produce draft colts, and is mated to a good stallion.

C. B. WADE.

Horse Notes.

Early education for the colts; nothing is like it.

Rapid walking is the first gate to teach a colt.

After all, what good ever comes from shouting and swearing at the horses?

A horse owner was once grumbling about how his team always kept thin no matter what tonics he gave them. A stableboy close at hand said: "Mister, did you ever try oats?" There is a suggestion here for some men we know of.

Prepare the colts for their first spring's work by a fairly liberal grain ration from now on, combined with plenty of work on the sleigh and a run out of doors every day.

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E. J. ANDERSON.

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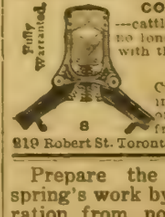

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POULTRY.

The Principles and Practice of Poultry Breeding.

(Continued from last issue.)

THE PRINCIPLES OF BREEDING.

Heredity. Only a little experience in breeding poultry is sufficient to convince the breeder that heredity both helps and hinders his operations. He learns in a very practical way that he has to reckon with the certainty of the inheritance of faults as well as desirable qualities of parents by the offspring.

Heredity has been defined as "the inheritance by the offspring of the characters of the parents, at the time of procreation." The parents repeat themselves in their descendants.

Of all the qualities of the parents transmitted to their offspring a portion only are apparent to our senses. Other characteristics are not so evident or escape our means of observation.

To explain the degrees of conspicuousness of parental characteristics in the offspring two terms have been used —dominant and latent. Dominant characters are those which are very apparent in the offspring. Latent characters are such as apparently disappear, become obscured or hidden from our observation. Dominant characters in one generation may become latent in the offspring of a later generations, latent characterf may reapear after ohe or more generations, sometimes becoming dominant.

In the mingling of the parental qualities in different offspring of the same parentage, there is never the same arrangement of dominant and latent characters. No two chicks of the same parentage are exactly alike. There is a rearrangement each time, which brings out qualities more or less dominant or conspicuous and the combination gives to each offspring its own individuality.

Atavism. If characters become dominant which were latent in the parents but apparent in a previous generation there is said to be a reversion or "throwing back." The offspring inherits through the parents some evident characteristic quality of a grandparent or of some more ancient ancestor. The scientific term of this form of Heredity is Atavism (from a Latin worn meaning ancestor).

Here is one of the dangers of the ambitious poultry breeder. He seeks to make rapid progress. He wishes to advance continuously and swiftly in perfecting his pets. He makes matings of birds uniting the characteristics which he most desires to develop in his chicks. In so doing he, perhaps, brings together birds possessing some strong opposing characteristics. Instead of commingling their characters to produce the desired composite chick their dominant characters disappear and a long latent character of the original type of the breed or of some almost forgotten ancestor becomes dominant in the progeny.

The cautious, careful, conservative poultry breeder makes haste slowly and avoids these breaks in breeding which arise because of the action of Atavism.

Prepotency. The poultryman who patiently persists in selecting and mating together his very best birds, with the definite and decided purpose to improve certain characteristics, finds that, instead of throwing back, the offspring strike forward. Pairing together two fowls of like good quality, if they do not possess antagonistic qualities or powers, usually insures the development of the good quality in the offspring to a greater degree than was apparent in either of the parents.

By mating together birds of similar excellent qualities the power of transmitting those qualities also is usually increased. By continuing this process generation after generation, in a strain of fowls, the valuable quality becomes more and more a distinguishing characteristic of the family.

In pursuing such a policy, there are sure to arise among the progeny, individual birds, which not only possess the desirable good quality but also show increased and certain power of transmitting the quality to their get. They are prepotent, i. e. very powerful in this respect. Such special, emphatic power is a very valuable possession and the poultryman should cherish such birds as of more than usual value in his breeding pens.

A prepotent male or female fowl may transmit prepotent quality to successive generations and numerous descendents so that, in the course of time, it becomes the leading characteristic of a variety or breed of poultry.

Prepotency in the transmission of certain valuable characters is the quality which causes pure-bred male birds to be purchased so extensively for use in crossing upon common farm fowls for the improvement of the latter.

Because a bird is pure-bred, however, one should not conclude that it is necessarily and always prepotent. There are degrees in prepotency. More than one bird of good pedigree has proved that its family characteristic of prepotency may become latent. Actual testing of a bird by use in breeding, will alone decide what degree of prepotency is possessed. When a bird is found to be especially prepotent in transmitting to progeny a certain desirable quality, such as large egg-production, rapid growth, early maturity, easy fattening; typical plumage, etc., such birds should be carefully controlled and kept for breeding as long as practically possible. The possession of a very useful quality and of prepotency in its transmission to offspring is the most valuable combination in poultry breeding.

(Continued next issue).

Hatching Chicks with Incubators.

EDITOR MARITIME FARMER.

Farmers are conservative in taking up new ideas; conservative in buying new things. They have to be. Nevertheless, when they see prospective profits oozing through the safety value of a new or improved implement, they feel that they must have it, even if they have to give a note for it, or encumber their farm with a new mortgage.

That's farm progress, which interpreted signifies prosperity on the farm.

No farm can be complete, no farmer can be superlatively prosperous where progress in labor—saving equipment is ignored. And this applies as well to incubators as to any other implement.

Where not many years ago nine out of ten farms had never heard of an incubator, to-day the word is passing from farm to farm that the profits are larger, the work less onerous, the hatches more sure, and the hens are taking fewer holidays, laying more eggs; not all on account of incubators, but primarily on account of the incubator, and secondarily on account of the large amount of book knowledge distributed with it. The farmer's wife is doing her share in the profit-making. She always has done it; but now she is gaining recognition as a partner in the business. This is having, it has had, its effect, and the result is, farmers are now posted on poultry profits. They will continue to be posted; and those who have been operating incubators will go back to hen-incubation only when they return to the old custom of treading out the grain with oxen—only when they are prepared to put the cream separator on the shelf.

Poultrymen who are in the business commercially, whose living depends upon the profits, would as soon think of threshing the grain with an old-time flail, as they would of hatching chicks or ducklings with hens or ducks. The thought would be absurd. Without the incubator they would have to go out of business.

Before the introduction of incubators large commercial poultry plants were an impossibility. Mr. James Rankin gets the credit of putting the first lot of ducklings and broilers on the market in considerable numbers, and making it pay. But James Rankin's only salvation was the invention of an incubator. Without its aid he found he could not make a business of raising poultry for market at a profit; so he made one.

That was many years ago. The incubator of to-day has improved as time has rolled on, and—but no more need be said regarding the future of the incubator (the built-to-hatch incubator) in the poultry business. Hens will continue to be used where only a dozen or two chickens are intended to be kept for home use; but on the farm where chickens can be fed cheaply and are raised by fifties or hundreds, the time-saving incubator, the economic method will be-is-adopted.

The farmer and his wife sometimes face a disconcerting situation when they have finally decided that they wish to get more of the poultry profits by buying an incubator. The question arises "Which incubator shall I buy?"

I may not advise them here except generally.

There are a number of good incubators on the market; and there are a number of built-to-sell machines that the farmer cannot afford to experiment with; but the present day farmer has his eye teeth cut and knows he cannot get something for nothing. To be successful in raising poultry one must use business-like methods with business-like equipment.

In buying an incubator go about it in the same way you would if you were buying any other agricultural implement. I might advise again and again, but I cannot give better advice than that. Think it over; and be as particular as you would in trading horses.

Mr. Editor: When you personally know of poultry plants each using from 50 to 100 incubators; of plants hatching 40,000 duckings in a single season; of fanciers hatching their New York, Chicago, and Boston winners in incubators, and raising them in brooders, there's not much left for me to say. It is not evidence of the utility of incubators that is wanted, because anybody can get that in any down-to-date incubator manufacturer's catalogue—evidence on the size of the poultry business; on the profit in the business on the decadence of "mother" hen (unless the hen that lays the eggs is the mother); and the coming-into-her-own of the hen that never could be

(Continued on page 343)

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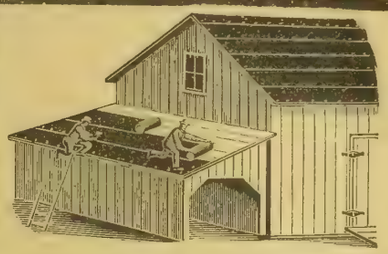

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THE FARM HOME

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The Ordeal; or, the Spring and Mid-Summer of a Life.

(Continued from last issue.)

It was a soft evening in early summer, just such an evening as the one, ten years before, when, for the first and last time, an arm that was not her father's and not her brother's, had encircled her. Something in the perfume of the flowers had recalled it vividly. A sharp pang of hope unfulfilled, a thought of a dreary, lonely future came with it. Ten years now since even the most casual intelligence had reached her, the election of Carrol Austin to the professorship of a Western college, a newspaper mention such as had told her of his ordination. But there was "fuel," in spite of Mr. Bradstreet's comfortable conclusion the remembrance of that winter, the knowledge that he was steadily and successfully pursuing his course, and above all, a deeper appreciation of the truthfulness, and honor, and utter self-sacrifice that had resigned her.

"Oh, did you speak, Lucy? Who? I really don't know. Some literary man and his wife, I believe, quite out of Hal's usual line. He's written a moral philosophy, or something of that sort, that they are going to adopt in college. I don't see why, I'm sure, when every one knows Dr. Cogshall's is the best text-book in the English language. Like everything else, though; can't be satisfied without this continual change."

So Miss Bradstreet made her simple toilet for her brother's dinner, without the slightest curiosity or even interest in his guests, and entered the dining-room rather late, to be presented to Prof. Austin!

"I took very good care not to tell her it was you, Carrol," said Henry Bradstreet, who was highly delighted with meeting "the friend of his youth." "She's a maiden aunt, you know, but a pretty good girl still—walks after the old gentleman and makes his tea in the most dutiful manner possible."

So he was married; her father had said his wife was to be there. Something had prevented it, for the rest were familiar faces; she would not ask what, for a dreary, benumbing feeling came over her. She had not looked for this as the end of her vigil; but it was human nature, and she had no right to expect anything different, when his last words had been—"No, Lucy, you must not say so; you are quite free!" She did not acknowledge what had kept her love alive, and how keen the blast that had quenched it. She thought it was faith in human nature that had suddenly been darkened; and she listened, and replied, and was courteous, even gay, in her bearing through all that long, beautiful, wearying dinner.

She stood before the coffee-tray in the drawing-room, at her sister-in-law's request, when the gentlemen came from the table. It was a relief to have something to do, a shelter from the few words that must pass between them. She could not help seeing that manhood had developed the once slender figure into full and noble outlines, that the fair hair was thinned about his white temples, that he spoke with a deeper thought and utterance. There was no disappointment in time's work She wondered if he thought her changed. She had found a gray hair two weeks ago! She was conscious of the sedate and thoughtful face that looked out from her mirror to her—that youth was over, and its illusions, alas!

"You do not ask for my mother, Miss Bradstreet." She started, for Mr. Austin had come directly to her. "My mother has not forgotten you, however."

"I have been remiss. I remember her distinctly." How often had that one meeting been lived over! and how firmly was the remembrance united to his! "She is well, I hope."

"Yes, and making my home happy, though she is a grandmother now, and my sisters steal her away sometimes."

"And Mrs. Austin—she is not with you to-day? You take no sugar, if I remember." For all her self-restraint, the delicate Sevres cup trembled in her hand.

"Mrs. Austin?—oh, my brother Ben is much too fickle to think of marriage even; even if he were old enough. He has more flames than our old friend Miss Perkins used to boast of."

"You misunderstand me. My father led me to suppose that I should meet Mrs. Carrol Austin here to-day."

"No, Lucy, forgive me, not unless he has withdrawn the old denial, not unless I am speaking to her now!" And, as in the old, old times, their eyes met, for the first that day; hers with sudden questioning, and his with a fond though reproachful look.

But they separated again without betrothal, unless a fuller and more perfect knowledge of the hearts and lives of each other formed it. Not that Mr. Bradstreet again denied his daughter's hand, she herself pointed out to her friend how impossible it would be to leave him, now that the habit and usage of a lifetime had made him dependent upon her for comfort and happiness. But their separation was not in utter silence as heretofore, and Lucy learned, by the history of his growing honor and usefulness, that, even in this world, "he that forsaketh houses and lands, for his Master's sake, shall receive an hundred fold."

The day came at last when she saw the Western home of which he had so often written. It was to be hers henceforth, all that she could claim, for her father's house was already occupied by strangers, and her cares for him were ended. Almost half her lifetime had passed since she gave the promise she had so faithfully kept, and the frail figure that came forth to welcome her was already bowed with advancing age. The brown hair was changed to silver, the face full of that repose which overshadows those who dwell in the land of Beulah, awaiting the messenger of the King, and her kiss was like a benediction, when she folded the daughter she had so yearned over, in her arms.

Mrs. Austin had seen her life-work well rewarded, despite many changes, many crosses, and more than one bitter disappointment; and now that her son's home was brightened and his youth renewed with the accomplishment of all it had desired, she could fold her hands tranquilly, and say—"It is enough; now lettest Thou Thy servant depart in peace."

(THE END.)

To Yield, or Not to Yield? That is the Question.

Mrs Mortimer was one of those old ladies with whom we sometimes meet, a sort of "mother to everybody," whose good sense and kindness of heart make us forget that she is old, but invite our confidence, make her a welcome guest in our family, and whose rebukes we receive as "an excellent oil." This is what Mrs. Mortimer was; who she was is of no consequence. It will matter little who we are, when we stand at the court of Heaven; but what we are will be a question of momentous interest.

Mrs. Mortimer came to spend some days in the family of Mrs. Sabin, a frank-hearted little lady, who had a high idea of her "rights," and no small determination to maintain them. She was an "oldest daughter," had always had "her own way," was long the acknowledged governess of several younger sisters, and it is hardly strange that she had come to have an imperious little will, which never showed its power more than in the question which she often propounded to her husband, to wit: "Do you think it is a wife's duty always to yield?" Indeed, this was asked so often, it was evident that the true sentiment was, "I think a wife ought never to be asked to yield a point upon which her heart is set."

Mrs. Mortimer had been with her but a few days, when, entering her room one morning, after Mr. Sabin had left for his daily duties, she found her young friend weeping. She said nothing, as Mrs. Sabin hastily dried her tears; but, suspecting the cause, she determined to interefere a little in her domestic relations, as few could do without the almost certain prospect of making a bad matter worse. It was but the work of few moments to draw out her impulsive young friend; and, hoping for sympathy but hardly thinking she needed counsel, she thus made her grievances known:—

"I want my husband to love me as he once appeared to. Once, his language was full of endearment; but he has grown reserved, and, though he never speaks unkindly, he seldom greets me with a kiss, and every day I want something which he refuses me. I am sure I try to be a good wife, but I have lost all my influence with him, and my opinion and wishes seem to be of no account. I wonder if all husbands begin to lose their love as soon as they are married?" And a fresh burst of tears concluded the paragraph.

Mrs. Mortimer waited till she became calm, when she asked: "My dear, did you ever ask yourself what your highest motives for wishing your husband to love you?"

This was a new train of thought.

"Why," said she, hesitating, "everybody wants to be loved."

"Very true," said the old lady, "but for very different reasons. I know one lady who wants her husband and others to love her simply for the happiness flowing from mutual affection; and I know another whose strongest motive—though she is all unconscious of it—is, that he may yield to her wishes in all things, and make it the highest business of his life to gratify all her demands. Need I add that, while the husband of the former has come to think his wife an angel in the flesh, the latter can see little evidence that she is loved at all?"

This brought out Mrs. Sabin's fundamental idea: "Do you think it is a wife's duty always to yield?"

"I will not say whether it is her 'duty', or her privilege, or her policy, though it may be, in the broadest sense, all. If husband and wife are 'one,' there cannot be opposing powers. That destroys the oneness, and with it the sacredness and happiness of the marriage relation. God has made man the strongest physically; the laws—whether right or wrong—make him the strongest socially and pecuniarily; his sphere gives him the best means of judging of men and motives; and the Bible treats him as the head and ruler of his household. I know that, in this age of 'woman's rights,' the justice of these things is called in question, but I take neither side of the agument; I look at facts as they exist. As a matter of fact, the woman's 'power' is not equal to the man's. The men believe this is right. I do not know but it is; and though they often abuse their power, it may be yet the lesser of two evils, for I am not quite sure that we should prove ourselves any better able to govern justly and wisely than they. You ask if a wife should always yield. I will only say, as a matter of fact, paradoxical as it may seem, those wives who yield the most implicitly rule the most imperiously they do so because they bind their husbands' hearts with stronger cords than those which bound Samson—cords of love, which makes them anxious to gratify every wish, if proper and possible. This result is not because of the wife's 'submission', but because it shows a confidence in his judgement, a respect for his character, and a gentleness of soul which no man who is a man can resist. On the other hand, every time the wife sets up her will against his, and shows a determination to worry him into a compliance with her wishes, against his judgment, by teasing, fretting, or otherwise, or yields only because his will and his power are the strongers, she sunders one of those cords, and may, in a little while, crush out all of his affection, with agonies to him worse than death. As least, this is the conclusion to which I have come, after a long life and a sad experience of my own. I have suffered, but by Divine grace—I was led to see my error before I had quite made a wreck of all happiness. When I had almost weaned my husband's last yearnings of love, I made him, as I said, by Divine grace—for I could not have done it alone—again the devoted lover; and I enjoyed a second honeymoon, that lasted till I saw his spirit depart, prepared, as he was, for the higher duties of a holier world."

The old lady slowly removed her spectacles, to wipe a tear from her eye, and continued:—

"I will tell you some of my history, though it brings up some bitter memories. But that is nothing, if others can benefit by my experience.

"I am not what I once was, nor is the world what it once was to me. But, oh, the struggle that this change cost me! Yet the victory was worth it all. I was a spoiled child; I did not know it then—few of my friends knew it. It was a severe experience that

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If you want special advice write to Mrs. Pinkham, at Lynn, Mass. She will treat your letter as strictly confidential. For 20 years she has been helping sick women in this way, free of charge. Don't hesitate—write at once.

taught it to me. I had an affectionate disposition, all my wishes were gratified, and I thought they always should be. Self-denial was a lesson I had never thought of learning, and no one knew the strength of my unbroken will, because it was so little resisted. I was poor, but had no idea of the value of money, except to spend for the first thing my fancy coveted. If a dollar was all I possessed, I would have shared it with a friend for the first gratification that presented; and if my desires were ungratified, it was only because they must be, and that was not self-denial. Thus others were almost as much decived in me as I was in myself. They thought me wholly unselffish, and little dreamed that I had hid away in my heart a self-will that never slept.

"Thus I lived on, in that sense unknowing and unknown, till Mr. Mortimer offered me his hand. He had lost a wife, not many years before, whom he almost adored, and he promised me the same devotion he had given her. I had know her intimately, and I felt that if I could be loved as she was, I should be satisfied. He appeared devoted to me, and I became his wife, hoping to fill the place of the last one in his heart. I thought I wanted to restore happiness to his heart, and did not dream how much self had to do with my plans. He had property, and I felt that, in marryiug me, he gave me, not only legally, but morally, an equal right to it, and was able to support me genteelly—that is, in a style equal to anybody else. It was the same to me as though I had toiled with him in its acquisition. I forgot the years in which he had struggled and sacrificed his personal comfort, and that his first companion had practised self-denial, in obtaining it. I only considered that money was good for nothing but to spend and enjoy. I believed, though mistakenly, that he could afford to grant all my desires; and when I made my wishes known, it it was with a tone, if not in the words, of demand; and though I accomplished my purpose often by teasing and worrying him till he yielded, contrary to his judgment, I little dreamed how dearly was my victory bought. How could he but despise me, when I gave him every reason to think that I loved his money quite as much as I did him, and claimed greater rights to it than did the lost one whose economy and love helped him earn it? I thought not of these things, but believed he was bound to gratify and love me, whether I showed myself lovely or not.

"If we differ in opinion, I could not believe that his superior experience and knowledge of the world ought to make him the most competent judge; so I never yielded my judgement to his. Yielding in opinion was as unnatural to me as yielding in conduct. My husbsnd say that I had no respect for his understanding, but considered my own opinion infallible.

"I knew it was necessary for the wife of a poor man to work; but thought the wife of one above want had a right to enjoy life according to her station, and that, if I did anything that could be regarded as 'labor,' my husband ought to pay me as much as it would cost to hire it done by menial hands, that I might have something to spend for things he was not willing to furnish me. Thus, to enjoy my opinions—or to maintain them, for I found no enjoyment in the victory—to have my own will, and to accomplish my own ends, I was willing, unconsciously, to cut myself off from my husband's sympathies, and, while claiming to be one with and equal to him, and entitled to a wife's respect and love, I degraded myself in his eyes to the level of a mere mercenary housekeeper, striving to drive the best bargain I could with him, and obtain all the favors, under the claim of 'rights,' that I could from him.

"I saw his love declining, and, in my heart—sometimes in words—I reproach-him for it. I thought his love was my due, without any demand upon me for respect to his wishes, confidence in his understanding, or surrender of my will to his. He became melancholy, shunning society, under the plea of business, and rarely greeted me with a kiss or a sign of endearment. At length, he was taken sick. He came home, and lay down upon the sofa, and I asked what was the matter. The mournful answer was: 'I am sad, sick, and weary!' No more was said; but my heart told me something of the meaning of his words, though I little dreamed that his sickness was more from anguish of spirit than any other cause. I felt that there was a wide gulf between us, but could not believe that I was at all responsible for it, or had power to heal the breach.

"We were mutually unhappy; and one evening, when he was better, after we had retired, with no kiss of loving words, I was impelled to ask him: 'Do you love me?' Several times I repeated the question, with no answer, till, at length, he exclaimed, with deep emotion:—

" 'Oh, how I would love you if you would let me! I could love you with perfect devotion, but you perfer your own will to your husband's love. You despise him, or his judgment would secure some respect; you love him not, or his wishes would have some weight; you disregard his experience and deny him any authority as the God-appointed head of the household, and all control in domestic affairs, except as he becomes subservient, usurp his place and deny his right to control his own business, and are fast crushing out the last breath of that deep affection which he longs to lavish upon you.'

"I was disposed to be angry, and put myself upon a defence, for I could not believe I deserved such reproaches; and my first plea was to ask him the verv question which you have put to me, and which has induced me to tell you my sad story; 'Do you think it a wife's duty always to yield?'

" 'I do not ask you to yield,' said he. 'Stand to your rights, and defend them from that citadel of your will that never surrendered; but think not to win a husband's love by reproaches; his caresses by complaints; or his respect by contempt. You may yet make him a devoted lover, or you have little more to do to leave before him only the prospect of a cold and cheerless life of duty, as the mere guardian of one he would enshrine in his inner heart if he could!'

"I need not tell you, my dear friend, that my pillow was drenched with tears. He said no more, and I might have supposed him sleeping, but for an occasional sigh, such only as a man in his agony could give. Nor need I tell you, I trust, that, when I became calm, I made that night a night of solemn review. My pride was humbled; I began to look at things as they were; my heart told me his bitter words were too true, and, for the first time in my life, I truly believe, I pronouneed judgment against myself. It was all plain,—plainer than he had expressed, or than I could express it; and, in those silent, solemn hours, I resolved, before my Maker, that my will should be subdued, and, right or wrong, with a view to the highest good, my husband's judgment should in all things be mine. But think not that my will, unsubdued for nearly thirty years, was conquered by a mere resolution. Deep, often, were my struggles, and terrible the conflict in my breast. I could but often feel that I was yielding my rights; but even this was scarcely as hard as cheerfully to yield my desires. But I resolved it should be done, and, bringing my will to make war upon itself, I began the conflict. I made my husband no promises, but he soon saw my efforts and appreciated them. It was strange to see how soon his eye began to light up with hope.

"My change was, at first, mostly the result of mere determination; but, by degrees, my heart and inclination came to accord with it. My husband's smile was at first with a look of fear that my change would not last; but, in a little while, he was as happy as he was devoted to me. I was changed. The lesson was never forgotten. He saw that I had conquered myself, and I had no more cause to ask if he loved me, for the accents of endearment were continually upon his tongue. I found that, in yielding all, I had gained all. I had no wish ungratified, for it was his wish to gratify me, and I had learned to limit my wishes to the decisions of his judgment. I had subdued myself, and become the gentle, confiding wife, respecting my husband as I had never done before. Thus we lived, with unalloyed happiness, till he was called away to a better world, where, with his former companion, he waits for me, and where, by Divine grace, I expeet ere long to go.

"This is my experience, and it has taught me that the wife who 'rules her husband' cannot respect him, and he cannot love her, except, perhaps, in those rare unions where he has a very weak mind, and she really a very strong one. In such a case, the order of things may be reversed."

Thus the kind old lady closed her story; and Mrs. Sabin, with a tearful eye, like one of old, "kept all her sayings, and pondered them in her heart." Whether the true philosophy of connubial felicity was developed in her history our fair reader will judge.

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Work in Happiness.

I was visiting a good woman one day when she showed me a photo of her younger brother, a tall, strong fellow of about thirty-five. She remarked with pride: "He's retired now. He doesn't have to work any more. He sold his farm and just lives on his money." She seemed very pround of the fact, as if a farm and the work thereto was something abhorred. Now I differed, so I had curiosity enough to ask: "Indeed, and is he happy now he has nothing to do?" "Well," she replied, "he ought to be, but he says he wishes he was back on the farm." I thought, isn't it also on account or our wrong ideas and ideals. We don't realize that to work at whatever is our lot is the only way to be happy. Since the decree sent Adam to work in the garden, it has been man's greatest pleasure as well as necessity to work and enjoy the use of his powers. To use one's brain and hands normally is more pleasure than to sit with them dormant. So many men work to save enough to retire on, and then when the time comes and they retire, they are dull and unhappy, and realize all too late that one must take the happiness along with one's work and live as he goes along. Joy is not a thing we can put away in a bank to be drawn out in the future.

Eating an Apple.

"Do you know what you are eating?" said the doctor to a girl.

"You are eating," said the doctor, "albumen, sugar, gum, malic acid, gallic acid, fiber, water and phosphorus."

"I hope those things are good. They sound alarming."

"Nothing could be better. You ate, I observe, rather too much meat at dinner. The malic acid of apples neutralizes the excess of chalky matter caused by too much meat, and thereby helps to keep you young. Apples are good for your complexion; their acids drive out the noxious matters which cause skin eruptions.

"They are good for your brain, which those same noxious matters, if retained, render sluggish. Moreover, the acids of the apple diminish the acidity of the stomach that comes with some forms of indigestion. The phosphorus, of which apples contain a larger percentage than any other fruit or vegetables, renews the essential nervous matter of the brain and spinal column.

"Oh, the ancients were not wrong when they esteemed the apple the food of the gods, the magic renewer of youth to which the gods resorted when they felt themselves growing old and feeble. I think I'll have an apple," concluded the doctor.—Ex.

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CREELMAN BROS. 2
Box 598 GEORGETOWN, Ontario.

Origin of the Blue Wedgewood.

EDITOR MARITIME FARMER:

How many people know that the beautiful blue wedgewood sugar bowl, cream pitcher, pin trays, mugs and other articles, too numerous to mention, were first invented and manufactured by a poor cripple, called Josiah Wedgewood? Perhaps a short narrative concerning him and his ware would be interesting.

He was the thirteenth son of a potter, who owned a little pottery, that stood in his back yard. When Josiah was nine years old, his father died, leaving what little he had to his eldest son, Thomas. This was a severe blow to the already overworked mother. About this time a very malignant type of small pox broke out and for weeks little Josiah hovered between life and death. Finally he began to recover, but the settling of the disease, in the lower part of one leg, and the eventual amputation, made him a cripple for life. His face was also horribly spoiled, pox marks standing out like moles. His affliction gave him a very sensitive nature. It sent his mind inward and in after years it drove him to meditate upon the laws and secrets of his art. So while other boys of his size were frolicking through the streets of the little village of Burslem, where they lived, he was learning the three R's from his mother, who was an educated and refined woman.

It is said his mother gave him his first inspiration for fancy pottery by writing his name in clay. Years after, he relates, that he copied it a hundred times a day for a week, writing with a stick in the mud. In a record of that long illness and mutilation of the boy, we are told that he often repeated: "If I cannot work with my feet, I will with my head," and he did. When Josiah was fourteen years old, he could write better than his mother or any member of the family, and his education was considered complete.

At this age he was bound over to his brother, Thomas, for five years, but his frail form could not stand the work and confinement, so he was again taken ill. It was about this time that Richard Wedgewood, his uncle, came over from Cheshire on horse back to see them and behind him, seated on a pillion, was his only daughter, Sarah. In the kitchen, propped up on a bench, with his lame leg stretched out before him, sat Josiah, pale, wan and woefully pitted with ugly purple marks. The girl was at once aroused to pity and gave him a book to read. Of course he was foolish enough to fall head over heels in love with her at once; but in after years she proved to be his guiding star. Thus is the old saying of Emmerson verified, "Hitch your wagon to the stars." When he recovered and got to work again, he did not make brown butter crocks and stone jars all of the time, but began to experiment with new clays, colors and glazes, making many beautiful things to send his cousin Sarah. Poor Josiah chaffed under the chiding of his brother, who knew no way to succeed save to stick to the old way.

At nineteen his apprenticeship expired and in a diary, still preserved by his decendents he says: "I have my trade, a lame leg, the marks of small pox. I was never good looking, anyway." His brother, taking note of his ability and art, would not let him go, claiming the legal guardianship over him until he was of age.

He had safely turned his twenty-first year before he decided to go and visit his uncle; but down deep in his heart, it was to see the young girl, of whom he had been dreaming for years. On arriving in Cheshire he did not find the little girl, who rode over on horse back to see them, but a beautiful young lady—a dream of grace and beauty. He was more than ever conscious of his limping and his marked face. On the whole, he was very uncomfortable and miserable. This feeling, however, wore off in a few days and returning to Burslem, resolved to break away from his brother and get into business for himself. This awkward, homely cripple loved the beautiful Sarah—her life to

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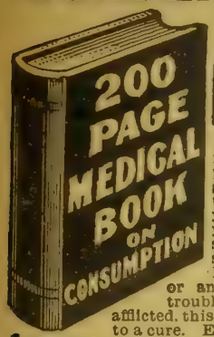

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

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him was a great living presence and all his plans for the future were made with her in mind.

He invented a mill to grind stone, experimented with the different kinds of rock and became a skilled modeller. In a year he had saved a hundred pounds, which seemed quite a fortune. Sarah wrote him: "I am so proud of you; we all predict for you a great future." Such assurance gave him courage and we find him immediately setting out for Cheshire, to call on Squire Wedgewood on very important business. Of course we will not tell the reader what that business was. Just let it go that the Squire told him he was a great fool to expect his daughter to marry a poor, homely, lame potter. The girl would one day be worth ten thousand pounds and the man she married must match her dowery. Poor Josiah's assurance was exhausted; he turned white, then red, could think of nothing to say, so he stumbled out and away as quickly as possible. He did not even wait to say good-bye to Sarah, who had hidden herself in a closet to hear what her father would say. His first inclination was to find out where the river was, that there might be one potter less. He had not gone far, however, when a vision in blue appeared, running across the meadow. "Oh, Josiah," she cried, "You can match my dowery—try, you can do it—I will wait," and giving him her hand, which he twisted and wrung most unmercifully for a moment, was gone. Needless to say this gave him new courage and from that moment he was a man among men, something more than a lame, homely potter. He studied, worked and evolved, and became the most famous potter in all England. It seemed a long up-hill task, but he must make the money somehow. Finally his business began to increase, his bank account to swell into the thousands. He was thirty years old, with nearly the magic sum. Sarah sent three cheering letters every week, for ten long years, and he as many in return. The old postman got many a tip from both and Sarah often sent him a mile out of the village, because her father had made a hard and fast law that one letter a week must suffice.

When Josiah was thirty-four and Sarah twenty-nine, the desired amount had been realized and it is said they walked over to the little village of Astbury and were quietly married, the sole witnesses being the Rector's family and the old postman, who had played such an important part in their lives.

One year after marriage, a little daughter was born and they called her Susanna, after his mother. Susanna grew up and became the mother of Darwin, the great scientist.

Wedgewood, toward the close of his life, was regarded as the richest man in England, who had made his own fortune. In speaking of his wife, said: "I worked for her approval and without her faith in me, I realize that my physical misfortune would have overcome my will and failure would have been written large, where now success is stamped."—FARMER'S WIFE, Andover, N. B.

First Aid in Letter-Writing.

There are doubtless many busy women, like myself, who have numerous friends and relations, living at a distance, with whom they are expected to keep up a correspondence. I used to be so tired when I finally found time for letter-writing that I could scarcely think of anything to write about. Now I keep a pad and pencil lying in a convenient place, and while about my work if something suggests itself to me, I jot down a word or two—enough to bring it back to my mind when I am ready to write.

The result is, that instead of just a greeting and an adieu, with comment on the weather and the health of the family spread over the space between, my friends receive bright, newsy letters and I have the satisfaction of knowing that I have not sent out an epistle that I am ashamed of, but the kind I should wish to receive myself, which is the real test in this as in many other things.

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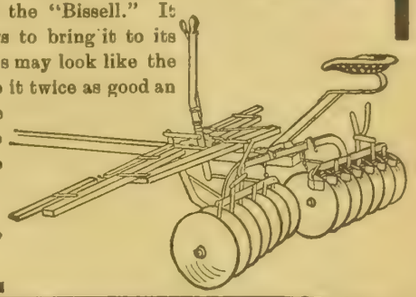

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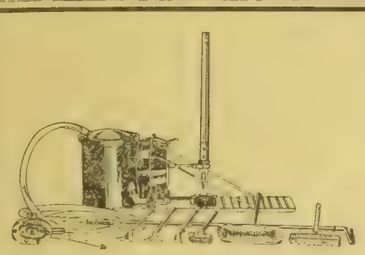

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What Was it.

Guess what he had in his pocket:
Marbles and tops and sundry toys
Such as always belong to boys.
A bitter apple, a leather ball?
Not at all.

What did he have in his pocket?
A bubble pipe and a rusty screw,
A brass watch key broken in two,
A fishhook in a tangle of string?
No such a thing.

What did he have in, his pocket?
Gingerbread crumbs, a whistle he made,
Buttons, a knife with a broken blade,
A nail or two, or a rubber gun?—
No; not one.

What did he have in his pocket?
Before he knew it slyly crept
Uundr the treasures carefully kept,
And away they all of them quickly went.
'Twas a hole.

Discouraged Brother.

Say, brother, what's your trouble?
Ain't the old world used you right?
Look as though you'd give up hopin' 's
though you'd lost the heart to fight;
Have you found out that it's useless to
expect to stand ashow?
If so, tell me how you've done it—tell
me how you reely know.

Ain't you gettin' what you're earnin'?
Can't you find no work to do?
Have you got to thinkin' mebby God
has got it in for you?
S'pose you've got a sort of notion you'd
be way up in advance
With the winners if you'd only had
some other fellow's chance.

Come, now brother, let's be honest—
let's gid right down to bed rock;
Don't you, when you'er workin,' always keep a-lookin' at the clock?
Don't you just do what you have to, in
a slip-shod sort of way—
Not because you like to do it, but because you want the pay?

Yes, I thought so! You've a notion
you've been cheated, hain't you,
now?
Got a sort of dark suspicion everything
is wrong, somehow;
Think the world owes you a livin' and
has tried to shirk its debt—
When it rains you want dry weather,
when it's dry you want it wet.

Have you ever stopped to wonder why
the world should ever care
Whether you are feelin' happy or are
clingin' to despair?
Have you riz to such importance that
its likely anyone
Can be feelin' jealous of you or belittle
what you've done?

Guess the trouble with you, brother, is
you just don't care to try,
And you think the sun quits shinin'
when a speck gits in your eye;
Mabby things would look some brighter
if you'd give up findin' fault
And git all your pores well opened while
you tried to earn your salt.
—S E. KISER, in Chicago Record-Herald.

Only for Women.

The wives of farmers perhaps wrinkle at an earlier age than any other class of women. Their incessant daylight duties prevent them from giving much attention to their own personal appearance, and after the day's work is accomplished some of the hours which should be devoted to refreshing sleep are spent ageing plans for the morrow. My unenviable experience as a farmer's assistant has placed me in close sympathy with this necessarily industrious, but self neglected band of women and for this reason I am always on the alert for something that will be of practical benefit to the toiling country madam or maiden. The majority of these have the pure air, the wholesome food, and limpid water which are essential to the health, and I now give two simple, time-proved formulas for either restoring or preserving the good looks. Both were used by belles of the eighteenth century, and are of unquestionable merit. Slowly distill equal parts of house-leek and celandine and apply to the skin after washing it thoroughly with distilled rain water. This lotion will finally eradicate those unwelcome and unsightly blemishes known as freckles. The Wrinkle Banisher is prepared as follows:—Strain barley water through a home-made muslin bag, put this water into a new bottle and add a few drops of Belm Gilead, which our druggists will now smilingly tell you is called Tincture of Benzoin. Shake unceasingly until the fluid presents a milky appearance, which will probably require ten or twelve hours. For this reason it should be made only when the bottle can be quickly transferred to the hands of a large family. Before applying this much-praised cosmetic remove all impurities by thoroughly washing the face with newly fallen rain water strained through a piece of cloth of suitable texture.

Women and Fashion.

It is an old saying that "One might as well be out of the world as out of the fashion, but Dame Fashion her self, if she were a person, would smile at the way some people follow her decrees so blindly. When will women learn that they themselves are the important interest and not their clothes? The modern woman should let her clothes express her own individuality. If she copies other people merely she seems but one of the crowd. The best way is to follow the fashion modified to suit one's own particular individuality, one's own purse and station in life. Gracefulness and suitability should never be lost sight of. The fashion of the day is always charming to some particular style of figure, but just because it is the fashion it need not be adopted by all. This is the day for those with ample figures to rejoice. The long lines of the onepiece or princess gown decreases the apparent breadth and increases the effect of height. But the very slender maiden will be wise to avoid it, as it, for the same reason will make her look frail. The skirt and the waist idea with their cross line of belt should suit her and should likewise be avoided by the stout woman. This season the prevailing fashion for the hair is very full and low, with coils or puffs at the back of the head. This is a very pretty style for the tall, slender ones, but those with short necks should wear theirs higher up. Common sense and suitability should govern one's appearance more than fashion.—Aunt Jane.

What a Boy Can Do on a Farm.

When I was four years old my father gave me a ewe lamb to be all my own, writes an Indiana boy in Breeder's Gazette. I was to give him half of her lambs and wool for feeding her and her lambs. I saved the money I got for my share of the stock.

When I was eight years old father gave my sister and me a pig to raise; we fed him well and when we sold him we got $3 each. This much more added to my account it began to get larger each year.

At the age of eleven my mother went to Michigan for her health; she gave me a hen and some thirty chickens, if I would feed her chickens well while she was gone. I did so, and when I sold them I took the money and what I had pefore and bought a sow from my father. I was to give him half the pigs she raised and he would feed the sow and pigs for market. I still saved the money I got for my stock.

At the age of thirteen I purchased a steer from my father, with the agreement that he was to receive half the gain. When I was fourteen I purchased a colt for $47 50 from a neighbor. I am fifteen years old and have the following stock; one colt worth 70; four sheer worth $22; five hogs worth $30; cash on hand $71; total $193.

This shows what a boy can do on the farm if his father will give some stock and share with him in the profits. If more well-to-do farmers would give their sons some stock it would be an encouragement to the boys to feed and care for stock, and there would not be so many boys leaving the farm and going to town to work as hired men

It is claimed that this cheap mixture marvellously improves the complexion, or preserves the bloom of youth and if used but once a day (and what woman cannot apply it to her face while resting)? it smoothes the corrugated brow, causes gradual disappearance of many-toed crows foot and imparts to many neglected skins a surprising, infantile freshness. Either rice-flour or wheat-starch is advised to be used in connection with the foregoing recipes, but a friend who has experimented with toilet preparations assures me that these vegetable powders are very injurious to the complexion. By coming in contact with the general moisture of the skin known as perspiration, they easily sour and ferment, perhaps bleaching the skin for a time, but finally producing an irritation, which, if not arrested in its early stage, will result in eczema or some kindred eruption. Long experience and a chemical analysis of Mennen's Borated Talcum Powder causes this friend to believe it is the most soothing and healthful that can be found. Talcum, being a mineral, undergoes no fermentation and when judiciously incorporated with boracic acid and other healing ingredients, produces what she regards as the only suitable application for the "human face divine"—Epitomist.

A New Candy.

If you have not yet heard of this new and delicious sweetmeat, you may be sure that you will derive much pleasure, not only in making it for your own use, but in introducing it among your friends for while a "new" candy is not so great a novelty in these days, this new "Sea Foam Candy" has won instant popularity. Here is the recipe: To three cupfuls of light brown sugar add one cupful of boiling water, and place over the fire. Stir only until the sugar is dissolved, then cook without stirring until it spins a thread. Take from the fire, and when the mixture stops bubbling add it gradually to the stiffly beaten whites of two eggs. Continue to beat, using a wire egg-beater, until the mass is soft and creamy, and yet is of sufficient consistence to stand alone without spreading. Flavor with vanilla when half beaten, and, when done, add a cupful of English walnuts that have been chopped rather coarsely. Drop in pats on waxed paper.

MISS A. S, Sydney, N. S.

A Way to Alter Skirts.

Endeavoring to find, without ripping, a way to alter skirts that had become too large in the waist (which necessitated their being pinned in many places to prevent their dropping below the belt), I hit upon the following device:

My skirt was twenty-six inches and I wished it twenty-five.

After quartering the band, and marking each quarter with a pin, I took a large needle and some wrapping-string and ran it in the waistband with the short stitch on the right side and a longer stitch, not coming through; at each quarter I drew it up a little, making the first measure six and a quarter inches, the next twelve and a half, etc. The fulness thus equally distributed was not perceptible, and the skirt fitted as well as when first made.

To Get Rid of Ants

When troubled with tiny red ants getting into the cake box and other sweets place the box or dish of sweets in the center of a table or shelf and moisten all around it with essence of pennyroyal. The ants will not cross that strong odor and will gradually disappear.

Mrs. HELEN EICHHORN.

The Ever-Helpful Poultice.

BREAD AND MILK POULTICE.—Put one tablespoonful of stale bread crumbs into a gill of milk and let boil up once. Take from the fire and gradually stir in a little glycerine or sweet oil, so as to render the poultice pliable when applied.

HOP POULTICE.—Boil one handful of dried hops in half a pint of water until the half pint is reduced to a gill, then stir in enough Indian meal to thicken it.

MUSTARD POULTICE.—This may be made of equal parts of ground mustard and flour, made into a paste with warm water and spread between two pieces of muslin cloth or it may be made into a paste by mixing the mustard with lard or butter.

LINSEED POULTICE.—Take four ounces of powdered linseed and gradually sprinkle it into one cupful of hot water.

GINGER POULTICE.—This is made like a mustard, using ground ginger in place of the mustard.

A LETTUCE POULTICE.—Boil a good-sized lettuce in water till soft, then use the water to make a linseed poultice; the juice of the lettuce has a soothing effect.

The Etiquette of Cards.

The full name is used on cards. It is usual for a husband and wife to have separate cards and in the same style of engraving and the same shade of white. These small items are important. Business cards are never used in social matters. If a man needs a card with business address he may have this engraved on lower lefthand corner of his card. It would seem ostentatious to have the names of several banks on his card, but he should ascertain the wishes of his chief in regard to what to put on his business cards. He represents the persons or corporation in whose employ he is and must follow their wishes in the new enterprise in which he is entering.

Benzine Removes Fly Paper.

Any article—children's dresses, hubby's coat or trousers, books, or even the cat—that has had the misfortune to come in contact with a sheet of tanglefoot, can almost instantly be cleaned of the sticky substance if sponged off with benzine.—L. F. S.

Hints from Each Other.

Put a sponge or a moist fruit such as an apple or a cut orange into a cake box when the cake seems dry. The cake will absorb the moisture and some of the fruit flavor if left a day or so.

If you have rust stains on your linens buy five cents worth of salts of lemon, lay the spotted part over an empty bowl, cover with the salts, moisten the finger and rub it in a minute or two. After a short time pour boiling water over it and the spot should disappear immediately.

Another good floor wax is made from dissolving 1-4 pound beeswax in 1-2 pint of turpentine. This must be done very slowly and carefully on the back of the stove as turpentine is easily ignited if too hot. Keep stiring and beating occasionally till all the wax is melted, then beat well and set in pots to cool. Rub on the floor with a soft cloth and polish with a flannel.

Child Affection.

There has been a great deal of talk lately about the bringing up of children, so that the young parents hardly know just what way is best. We all want to bring up our children in the very best way possible, but experience alone can teach us just what suits each individual child in training

Most of us had parents who held to the idea that descipline must be maintained at any cost and the child taught to obey without comment and at once. Many others have maintained that children should develop of themselves happily and without punishments. Observation shows that the extreme of

discipline is stunning to the mind's individual growth, but that too much license with a child is like free growth to a grape vine. Moderation is the safe guard. Care and cultivation in child life is the same as in plant life. One would not think of boxing a grape vine all up tight—yet left without care or pruning the fruit would be small and useless.

The great principle is to teach the child that you love him—teach it again and again—by showing him by your care and thoughtfulness of his welfare, and by telling him so while he's small at least. Then also teach him to love you. He has to learn this as well as other things. So often we expect the little chap to return our love instinctively that we forget that we must show him how to express our feelings. The moral nature is a growth the same as the physical nature, and we must help him to grow happily and easily by showing him how, as well as living ourselves the best we can. The strongest love is that which is firm for what is good and right, but if the child understands we love him and loves us in return, he will yield to our firmness without resentment.

Teaching Children to Lie.

'Children, obey your parents.' 'It is as strange as sad how many children have failed to learn that command,' writes Ernest Gilmore, in 'American Motherhood.'

There is litttle Dan Goodwin, a bright, little fellow, with a sweet nature. He is, however, a regular interrogation point. I will give you a picture of him and his mother.

'Dannie!' she calls.

He is at play and does not reply.

'Dannie, come here,' raising her voice.

He continues to play, ignoring his mother's command.

'Dannie, do you hear me?' her voice still louder. 'Are you coming to me?'

He deigns to speak at last, but does not make the least move in her direction.

'What do you want me for?' is his query.

'I want to change your waist.'

'What for?' he demands.

'Are you coming to me, Dannie, or do you want me to whip you?'

'What do you want to change my waist for?'

At this state of affairs the mother comes after Dannie, and giving him a little shake, leads him toward a secluded back room, scolding and threatening all the way.

'You're a naughty boy,' she says, 'and I shall give you a good whipping for not minding me.'

He whimpers and then cries. He can talk now.

'I don't want you to whip me,' he says, 'I don't want you to whip me.'

Does she whip him as she has promised to do? Oh, no! She says presently. 'The next time you don't come to me the first time I call you I'll whip you.'

The next moment she is kissing him repeatedly as if he was the most obedient boy in the world.

Poor mother! Poor Dannie!

A second picture. Johnnie Brown is two years older than Dannie Goodwin, but his extra years have not brought him obedience. Johnnie is not more mischievous than the average boy of his age, but he has not been taught to mind. It is a May morning when we introduc Johnnie and his mother to you. The dew lies heavy on the grass, and Johnnie's shoes have thin soles, and he has on short socks, exposing his bare legs to the knees. He is in the centre of the wet lawn (which has not seen the lawn-mower) before his mother sees him. He has been forbidden to go on the lawn so early in the morning, but that bears no weight with Johnnie. As soon as Mrs. Brown discovers him, she calls irritably:—

'Come off that grass this minute.'

'What for?' is his response.

'The grass is wet.'

'What makes it wet.'

'The dew.'

'What's the dew?'

'I'll show you what the dew is,' angrily, if you don't come off the grass this minute.'

'Then show me now,' he bawled.

She seemed to realize her inability to get Johnnie unless she went for him, so she started on a run over the wet grass. Seeing her coming, Johnnie ran in an opposite direction. He had nearly reached a hedge, when she called:

'Look out, Johnnie, there's a big, black snake in that hedge; it'll bite you.'

There had never been a snake in that hedge, or in that vicinity in Mrs. Brown's remembrance, but the lie conquered Johnnie. It brought his little wayward feet to his mother. His face was white, his form trembling. Mrs. Brown had no trouble for the next two or three mornings in keeping Johnnie off the dewy grass, for he was very much afraid of black snakes. But there came a morning when he was on it again brancing about in wild glee. His mother was annoyed.

'Have you forgotten the black snake, Johnnie?' she called, but he only laughed.

'I'm not afraid of black snakes,' he said, 'besides therearen't any here nor never were. Billy Smith said so.'

Billy Smith against mother!

Alas, poor Mrs. Brown!

Oh, poor little Johnnie!

Just one more picture, although I could give you dozens, to say the least.

It would be impossible to find a brighter or more beautiful child than little Tom Hunter. He is only four years old, but has more knowledge than many boys twice his age. If little Tom had been taught to mind, he would be wonderfully promising. Young as he is, he seems to have settled the question, 'Shall I obey or not ?' in the negative. Tell him to 'come' and he 'goes,' to 'go' and he 'comes.' Tell him to 'close' the door and he 'opens' it, to 'open' it and he 'shuts' it. If he is knocking on the window and he is requested to stop, he knocks harder. He tries his mother to the verge of distraction, but (I say it regretfully) it is her fault. She has never taught him to mind. Probably she thinks she has done her duty, but threatening is not teaching—never was and never will be. This is a fair picture of little Tom and his mother one cold winter morning. The boy, as usual, has been disobedient. Scolding and threatening have had no effect, Mrs. Hunter has suddenly resolved to try a new medicine for refractory Tom (that is, new for her, although it is quite popular). The little fellow is still in the basement in open rebellion when his mother ascends the stairs to the first floor. He hears her open the front door, wondering what for, as no one has rung the bell. The snow lies thick on the ground.

'Helloa, old black man,' says Mrs. Hunter. 'Do you want a little boy, who doesn't mind his mother? You do, do you ? Well, you can have him; wait and I'll get him for you,' and she closes the door. Tom has heard her, and feels deeply wounded. He ascends the stairs as speedily as his short legs will allow, his anger increasing at every step. When he stands in the presence of his mother, the storm breaks. He stamps his feet and cries out :—

'Nasty ole black man ! He shan't have me, I won't go with him. I hate him; I'll kill him,' and he races to the door and tugs until it opens. The piazza has not been swept. The snow lies over it in an unbroken surface. He does not see any 'ole black man' or any trace of footsteps, and for one moment he looks dumbfounded. Then he cries out to his mother :—

'Tisn't so, there isn't no black man after me, an' there wasn't or there'd be tracks in the snow. It's a nasty old lie.'

It was not respectful of Tom to talk like that, was it ? But you will all admit that he told the truth.

Poor Mrs. Hunter ! She does not realize the kind of seed she is sowing.

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IF you will write to-day for a free sample of "Amatite" the end of your roofing troubles is in sight. After you have submitted it to every test that you can think of, you will be prepared to order it not only for your *new* buildings, but for your *old* roofs as well. You will find that it is cheaper to cover them with Amatite than to continue painting and and repairing them.

We make a strong point of our "Free Sample" offer because the smallest sample of Amatite speaks for itself. It is more convincing than yards of talk.

There are all kinds of ready roofings on the market—so-called "rubber roofings," so-called "guarantee roofings," so-called "sand surface roofings."

The "rubber" roofings are no more made of rubber than a cow is made of saw-dust. The "guarantees" that are promiscuously handed out with many brands are hedged around with so many provisos that it will take three lawyers to dissect them and find out what they are all about. The "sand surface" has little or no protective value.

The point to remember is that all of these roofings have to be *painted* every year or two to keep them tight. In other words, it is the *paint* that protects, and not the roofing. If a man will sit down and figure out exactly what this paint costs, he will find that it is more than the roofing itself. Amatite, on the other hand, has a surface of *real mineral matter* and we sell the goods on the broad statement that you need never coat or paint this roofing.

You can lay Amatite on a roof and then forget all about your roofing troubles. *No painting, no coating, no worry.* The man who puts Amatite on his buildings is insured against leaks and trouble for many years.

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If you have any doubts about the matter and want to investigate our claims, send for sample and booklet to-day. The sample tells its own story; the booklet is written for practical men. It hits straight from the shoulder.

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The Carritte-Paterson Mfg. Co., Ltd.

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Honey.

ONE OF NATURE'S BEST FOODS. It is only within the last few centuries that sugar has become known, and only within the last generation that refined sugars have become so low in price that they may be commonly used in the poorest families. Formerly honey was the principal sweet, and it was highly valued three thousand years before the first sugar-refinery was built.

It would add greatly to the health of the present generation if honey could be at least partially restored to its former place as a common article of diet. The almost universal craving for sweets of some kind shows a real need of the system in that direction; but the excessive use of sugar brings in its train a long list of ills. When cane sugar is taken into the stomach, it can not be assimilated until first changed by digestion into grape sugar. Only too often the overtaxed stomach fails to properly perform this digestion, then comes sour stomach and various dyspeptic phases.

Now, in the wonderful laboratory of the hive there is found a sweet that needs no further digestion having been prepared fully by those wonderful chemists, the bees, for prompt assimilation without taxing stomach or kidneys. As Prof. Cook says: "There can be no doubt but that in eating honey our digestive machinery is saved work that it would have to perform if we ate cane sugar; and in case it is overworked and feeble, this may be just the respite that will save from breakdown." A. I. Root says: "Many people who can not eat sugar without having unpleasant symptons follow will find by careful test that they can eat good well-rippened honey without any difficulty at all.

Not only is honey the most wholesome of all sweets, but it is the most delicious, and its cost so moderate that it may well find a place on the tables of the common people evey day in the week.

Indeed, in many cases it may be a matter of real economy to lessen the butter bill by letting honey in part take its place. One pound of honey will go as far as a pound of butter; and if both articles be of the best quality the honey will cost the less of the two.

GIVE CHILDREN HONEY. When children are allowed a liberal supply of honey it will largely do away with the inordinate longing for candy and other sweets.

Ask the average child whether he will have honey alone on his bread, or butter alone, and almost invariably he will answer, "Honey." Yet seldom are the needs or the taste of the child properly consulted. The old man craves fat meat; the child loathes it. He wants sweet, not fat. He delights to eat honey; it is a wholesome food for him, and is not expensive. Why should he not have it?

Honey may be used to sweeten hot drinks, as coffee and tea. German honey-tea—A cup of hot water with one or two tablespoonfuls of extracted honey—is a pleasing and wholesome drink.

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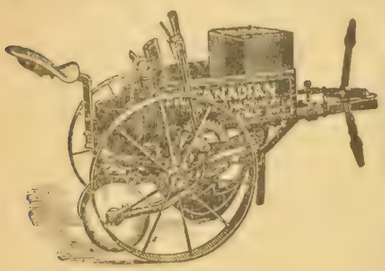

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A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address

Various Uses for Salt.

Of all the condiments known to modern cookery, salt is the most necessary and universally used. But indispensible as salt is in the kitchen, it is equally useful in the sick-room, laundry and for general household purposes; in fact, from garret to cellar, so to speak, salt it an ever-ready and resourceful adjunct to good housekeeping.

A weak solution of salt and warm water is a good remedy for colds in the head, sore throat or tender gums, used either as a spray, gargle or mouth wash; it is also a good and cheap dentifrice.

For bleeding of the lungs it is very efficacious, a large tablespoonful in a glass of cold water "to be taken freely."

For intestinal disturbances salt is an excellent addition to the enema as it both cleanses and acts as a tonic.

A tablespoonful in a glass of hot water sipped on an empty stomach is a cure for constipation.

To break the acidity in cranberries add a little salt.

Some claim that a pinch of salt added to boiled coffee improves its aroma.

Hot salt-bags relieve neuralgia, earache and tooth ache, and cloths wrung out of hot salt-water should be applied to all sprains and strained muscles. Salt-water foot-baths, hot or cold, are helpful for swollen or tired feet and children with weak backs and ankles should have a gentle salt-water rub once a day.

Every well equipped laundry should have a jar of salt among its assets. Immerse all handkerchiefs and bloody cloths in cold salt-water before washing; it eliminates all unpleasant features and stains. Put a little starch to give it gloss. Salt added to the water in which colored clothes are washed holds the color. If salt is put in the rinsing water, clothes do not freeze so readily when hung out in winter.

Salt on a piece of paper makes a good polish for flat-irons.

To remove rust spots wet with vinegar, cover with salt and expose to the sun; repeat until the stains are drawn out. Salt with vinegar is good to clean brass, bottles and stained cruets. Always add salt to the water kept in cuspidors.

Coarse salt moistened with amonia if spread on the carpet before sweeping will both clean it and restore its color.

Use salt-water to wash matting, and put salt in water to wash windows in winter to prevent then from becoming frosty.

If food has been spilled in the oven, cover with salt at once to prevent unpleasant odor. When the fire is low a little salt strewn over embers often revives it. Salt is used to thaw frozen water pipes, and if sprinkled on the door steps and outer stairs when covered with ice they are easily kept clean. In the fall strew salt on the flower beds after the buds and flowers are taken up, this destroys the seed and roots of the crop of weeds, during the winter salt disintegrates and when the beds are dug up it has some value as a fertilizer.

By this list you will see the importence of this simple mineral and the necessity of always keeping the salt cellar well filled.

Modern Motherhood.

After babyhood—oh so closely—comes the problem of education. The race has evolved to a plane, where it no longer is content with merely physical living, but demands that the brain be strengthened and exercised to its fullest capacity.

A child's mind is like the wax disk of a phonograph, fresh to receive impressions. There is no reason why it should merely catch the odds and ends, foolish nursery jingles, more or less heterogeneous adult conversation.

The kindergarten, the school, furnish careful training, combined with pleasure, and no child of six, unless seriously ailing, will be harmed by the regular, simple and methodical lessons.

In vain does the mother try to persuade herself that it will be better for the little one's mind to lie fallow a few years more. There is no reason for any human brain, however young, to remain inactive and vapid; and educationalists, for centuries, have been studying just the proportion of work and play best for a symmetrical development.

Then, too, if the child be an only one, as is so often the case nowadays—it is an injustice to it, to keep it from its kind, when its little soul yearns for its natural mates.

Who of us but can recall that wonderful first day at school! The pride, the wonder; the dozens of other little egos like ourselves; the owning of a slate! We did not express it then—we merely felt, but now we would say that there is no greater joy on earth than the conscious unfolding of the human mind. If school-days come that are burdensome, it is the teacher's fault, for study should be made fascinating—is it not the path to knowledge?

How can a mother be satisfied in giving her child anything but the best,—the best father, the best health, the best education?

We love our little ones, yes. Perhaps we love them too much. Our fierce mother-passion binds us sometimes to justice and right. Our children have a small quarrel with those next door. We rush into the fray like tigresses, protecting our own, assuming them to be right, without the slightest inquiry as to the facts in the case. What an opportunity was lost to teach them justice and control.

Again, to obtain peace, we cater to their worst sides. I once called on a woman, whose pretty little girl opened the door a crack and peeped in. "Go out this instant; don't come in here!" commanded the mother. I was disappointed, for I wanted to see the child. She promptly walked in, however, and was very much in evidence. When I asked about this, the mother cooly told me that Rosie was so stubborn that she always told her to do the exact opposite of what she really wanted, in order to insure desired results.

Gradually, however, the race is improving, and universal motherhood is becoming more intelligent.

Some Ideas on Resting.

I think I owe my good health and sound nerves very largely to the fact that I have never in my life as teacher or as housekeeper stood when I could possibly sit. Standing while about one's housework is often necessary, but it very often is not necessary. The little unnoticed strains are a greater wear and tear on one's vitality than are the big ones. Every kitchen should contain a small armless rocker and a stool, the latter high enough to sit on and reach the ironing-board easily, low enough to be pushed under the table out of the way when not in use.

Paring apples or potatoes and picking over fruit should be done while sitting in the rocker, as should the bit of sewing or the reading of a book taken up while superintending something cooking on the stove which must be waited for.

Another thing which has been of great value in preserving my strength has been an after-breakfast rest. Breakfast over, eveybody started off to school or business, I sit down or lie down on the convenient sofa with the morning paper for ten or fifteen miuutes. Then I get up and attack the army of the day's duties, beginning, of course, with the advance guard of the breakfast dishes. In those few minutes I have gained needed rest and from the paper something to think about while at my work.—M. D. V.

Saving and Spending.

The American woman is pre-eminent in many things. But her best friends can hardly claim for her that she is a careful saver or a wise spender. The most intelligent woman in the world, in many respects, she is not always intelligent on these two important points. She can earn money—no doubt of that. But economy is to her the dismal science, and investment a matter of

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Caustic Balsam

IT HAS NO EQUAL

For the Human Body — It is penetrating, healing and for all Outward Pains, Bruises or Wounds, Pains in the Chest, Colds and Rheumatism. CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

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The question of quality is the only one which should be considered when buying a piano.

The beauty and permanency of tone—delicacy of touch—superiority of materials and workmanship—are synonymes of quality.

The recorded judgment of eminent musical experts is—that the New Scale Williams quality is the standard of piano construction.

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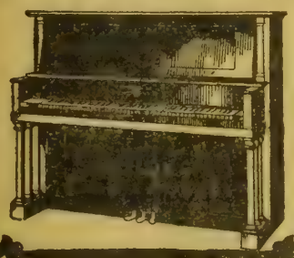

Cause Of Eczema Explained

Germs Fester in the Skin and Blood Cures are Impossible.

After years of debate medical authorities are now agreed that Eczema and other skin diseases are not seated in the blood, but are caused by germs in the skin. Myriads of microscopic animals gnaw the flesh just below the epidermis. The patient is perfectly healthy, it is only the skin that is diseased. Hence, scientists are agreed that you must cure the skin through the skin.

The medicine must be in a liquid form in order to penetrate properly, as salves and ointments clog the pores without reaching the inner skin.

The remedy that will search out and destroy the disease germs, stop the itch and sooth the healthy tissue is that mild, clean compound of oil of wintergreen, thymol, glycerine, etc., known as D. D. D. Prescription.

The instant you wash with this soothing liquid you will find the itch relieved. We positively assure you of this.

Write the D. D. D. Laboratories, Dept F. M., 23 Jordan St., Toronto, for a free trial bottle, and prove it yourself.

For sale by all druggists.

speculation, literally. Only in New England has economy become a part of character, as it ought to be. For money, in any quantity, is power, and power is responsibility.

The girl, who spends her allowance in candy and matinee tickets, is relaxing the moral fibre of her own character. She graduates into the woman, who buys a spangled lace robe, which she really could do without, because it is cheap or because she has a little extra money on hand. "The true view of economic life," insists an authority on financial questions, "requires that every expenditure be regarded as an act that involves a moral question, as indeed it does. It is a moral act if it be necessary and wise. If it be unnecessary and unwise, it is immoral, for it is the misuse of so much power as the money stands for." Perhaps this may be called a counsel of perfection. But it would bring, if followed, peace and prosperity into many a household where debt and financial chaos now reign. "Why can't we have bills? Then we could put all the people off," argued a bride of a few months with her young husband a professional man, striving to make his way on an income of fifteen hundred dollars. She was the product of a first-rate boarding, and the child of a family high in social position. But she was utterly uneducated in the morals of handling money.

Financial independence, for most families, can only be secured by careful, steady saving and equally careful spending. Such saving and spending mean self-control—the very root of all high character. The grocer's bill, the bargain counter, are moral tests. There is a great deal said and written nowadays about the "business woman," using the phrase to describe the woman who earns money. But all woman, in their relation to money, are business women. The earning of money is one branch of business; the distribution of money is another quite as important one. Both require integrity, self-control, and determination to do one's best, if the business woman is to succeed. The wife, who has the spending of her husband's income, can double its purchasing value if she has made a study of the art. Tried by this standard, it is hardly a credit to the American woman's intelligence to count up the households where no money is saved, where small debts accumulate, and where shopping is one of the amusements of life.

A Group of Ginger Cookies.

For years I sought in vain to find a satisfactory recipe for soft, thick ginger cookies, and at last I resolved to originate one.

Take one and one-half cupful of best Porto Rico molasses, half a cupful of sugar, a scant cupful of melted shortening (butter, lard, drippings or a mixture), one good teaspoonful of salt, one heaping dessertspoonfuls of ginger half a dessertspoonful of cassia, two dessertspoonfuls of soda, to dessertspoonfuls of strong cider vinegar, one well-beaten egg. Stir well together and add one scant cupful of buttermilk. If the buttermilk is not obtainable, hot water will answer the purpose very well. Then stir in lightly sufficient flour to roll soft, but do not mix the dough stiff, or the cookies will be hard. Roll thick, and sprinkle a little sugar over the top. Bake in a quick oven.

Many people dislike to let their children eat cookies in which there is much shortening. To meet such emergencies, here is a recipe that does not call for any: Mix well together half a cupful of sugar, a scant teaspoonful of salt, a teaspoonful of ginger, a teaspoonful of vanilla and one well-beaten egg. Bring one cupful of molasses to a scald, but do not let it boil; when hot, stir in an even dessertspoonful of soda, and, while foaming, add a dessertspoonful of strong vinegar. Pour this over the sugar and egg mixture, beating them well together; then stir in lightly sufficient flour to roll, and bake in a quick oven.

For thin crisp ginger wafers, take one cupful of molasses, half a cupful of butter or butter and lard mixed, one teaspoonful of soda, one teaspoonful of ginger, salt to taste and flour to form a stiff dough. Roll thin and bake till nicely browned in a quick oven.

Taking Care of House Plants in Winter.

Nearly everyone has some kind of fern or palm to give the house a bit of greenery, but a good many people find it very hard to keep these plants in good condition. Now the ordinary manner of watering palms and ferns is one of the surest ways of injuring them. Don't water these plants every day by pouring water in the top of the pot. This is all wrong. The proper method is to submerge the pot in a pail of water, and, after leaving it there for a few minutes, take it out and allow it to drain thoroughly. If watered in this way plants will remain moist, and the operation need not be repeated more than once in three or four days. It also prevents that decaying at the base of the stalk that arises from the water settling there when it has been poured into the top of the pot. Another thing that is very injurious to palms is the practice of setting a basin or saucer of water under them. In this way water is constantly absorbed and the lower roots become so saturated that they will in time decay.

It is often very difficult to prevent the foliage of these plants from turning brown. This is due to the dryness of the atmosphere of the house, and the only way to avoid it is to sponge the leaves with warm water every day, if the palm is large; or, if it is a fern or a palm with feathery foliage, it can be sprinkled. Ferns require less light than enters an ordinary house in winter will do no harm to either. The best manner of destroying insects on palms is a daily wash of warm water and wail-oil soap.—McCall's Magazine, Mrs. F. C. B.

The Mark of Age in Women.

"I mean to keep young with my children," said a clever woman the other day. "And the first wrinkle that would come on my mind, if I let it, would be fear and dislike of conditions as they are. I can't keep my children in the atmosphere of twenty years ago; it isn't there—it doesn't exist. I can't stay in it myself if I want to understand them and help them. When today ceases to be as good, as full of opportunity, as yesterday to me, then I will be old—and I don't propose to be old, if I can help it, till the last possible minute of my life. Besides, as long as I keep up with my girls, they find sense in what I say. They talk to me of their perplexities; they say, 'Oh, mother you always understand!' I had a mother who kept young with me, and I mean to follow her example."

It was a wise resolve. The line of age is crossed, truly, when we separate ourselves from the present—when we insist that "the former days were better than these." We cut ourselves off thus, inexorably, from the young, hopeful, marching hosts to whom the present is what twenty years ago was to us. And as Time cannot turn backward, we are left at the rear, to criticise and—yes—grumble. How much better the spirit of the young woman—eighty-five years young—who said, laughingly, on her last birthday, "No, things aren't where they used to be fifty years ago, I admit, and neither am what I was, and I'm glad of it?"

Burning String in the Sick-Room.

Months spent in the sick-room have taught me many things for the comfort of an invalid, one of the simplest and most effective of which is burning a string to purify the atmosphere.

Take a soft string and stick it with a pin to the back of a chair; after lighting, blow it out gently, leaving the tiny spark, which will create smoke enough to make a decided difference in the atmosphere. S. M. K.

GOOD REPORTS

Home Mixed Stock Food a Success

A short time ago we published in this column a formula for preparing Stock Food at home from Barnes English Compound and fresh nutritious grains.

We have received so many words of praise for this formula that we are reprinting it for the benefit of those who may have chanced to miss it.

The advantage of making your stock food at home, using only the pure medicines and fresh grains, and avoiding harmful drugs and worthless fillers, is certainly of great importance to every farmer and stockman.

The formula is as follows: Mix three pounds of Linseed Meal and six pounds Cornmeal with one pound Barnes English Compound, it will make ten pounds purest and strongest stock food that can be made. S. G. Amsden, Windsor, Ont., will send one pound package postpaid on receipt of 50 cents, money order or stamps.

Bedtime Lunches.

Physicians advise a bedtime lunch for nervous and emaciated people. The long hours of sleep consume about one-third of our existence. Although the demand made upon the system is naturally much less than during the waking hours, there is a wasting away of tissues consequent upon the suspension of nutriment for many hours. The body feeds upon itself, for food taken at dinner is digested at bedtime. Often one is restless and wakeful at night, the stomach is empty.

Onions are an excellent and harmless soporific. Eaten raw at bedtime, sliced thin and spread upon bread and butter, with a pinch of salt added to make them more palatable, they have cured insomnia where many high-sounding and possible harmful remedies have failed.

Keeping Dinner Warm.

Not long ago I saw a mother take off enough dinner for another member of the family who had been detained. With another plate to cover it, it was put in the oven to "keep warm," but in reality to dry up. I mentioned to her my way of keeping dinner for the late-comer, and she was so grateful for the suggestion that I thought some of the readers of MARITIME FARMER would like to know also. I have found "The Home Pages" of great benefit to me, and wish to lend a hand.

A saucepan filled nearly full of boiling water is put on the stove, and a dinner-plate containing the vegetables is placed over it; a pan covered over the plate will keep in the steam. For hours the dinner may be kept steaming hot and palatable.—E. L. M. A. St. John, New Brunswick.

The family that eats plenty of

Quaker Oats

is a healthy, rugged family.

The most popular food in the world because it does most and costs least.

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"Bronchitis."

THE SYMPTOMS ARE

Tightness across the Chest, Sharp Pains and a Difficulty in Breathing, a Secretion of Thick Phlegm, at first white, but later of a greenish or yellowish color coming from the bronchial tubes when coughing, especially the first thing in the morning.

Bronchitis is generally the result of a cold caused by exposure to wet and inclement weather and when neglected will become chronic.

Chronic Bronchitis is one of the most general causes of Consumption. Cure the first symptoms of Bronchitis by the use of Dr. Wood's Norway Pine Syrup

Bronchitis Cured.

Miss Martha Bourget, Little Pabos, Que., writes: "Last spring I was very poorly, had a bad cough, sick headache, could not sleep, and was tired all the time. I consulted two doctors, and both told me I had bronchitis, and advised me to give up teaching. I tried almost everything but none of the medicines gave me any relief. One of my friends advised me to try Dr. Wood's Norway Pine Syrup. I had scarcely taken the first bottle when I began to get better and when I had taken the fourth bottle I felt as well as ever, my cough had left me and I could sleep well."

Dr. Wood's is the original Pine Syrup. It is put up in a yellow wrapper, three pine trees the trade mark, and the price 25 cents. There are many imitations of "Dr. Wood's" so be sure you receive the genuine when you ask for it.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Make Farm Homes Attractive.

There is no place so susceptible of improvement as the average farm home. There is perhaps no place where so little is done to improve the beauty of the surroundings as one finds in the farm home. Usually there is an abundance and a variety in the topography of the land in trees, shrubs and plants of all descriptions, all of which may be used to advantage in making the home attractive. Tools and teams can also be had on the farms. It is only for the want of labor, a fixed time to do the work and a definite plan in mind as to how to go at it.

The trouble with many good farmers seems to be that they find little time to do anything else than attending to the most important work on the farm during the year. They attempt to cultivate too much land with the least possible help. Many farmers would in many cases grow rich faster if they cultivated less land, and cultivated it more thoroughly. Farmers with smaller farms could then plant the less productive places, the rough stony fields and abrupt slopes, the lowlands and sloughs, the odd bits, the irregular places in the angles framed by roads or fence lines, with trees such as would be objects of beauty and in course of time add value to the property.

Making our homes and surroundings attractive in this fashion would be a source of pleasure to those doing the work and all the occupants of the home The pleasant associations and memories of farm homes, where beauty and utility can be brought about to operate harmoniously, will make the home the dearest place to the boys and girls. Beautiful and agreeable surroundings about our country homes will keep our boys and girls at home and it will attract city sons and daughters countryward.

It is frequently intimated that farm boys and farm girls must work too hard and that there working days are too long; that little or no opportunity is given them for amusement and recreation in the country. While this is often true there is no reason why the country should not have all the advantages of a city. With the practice of making all things pleasing to the eye about our homes coupled with the use of rural telephones and rural free mail delivery, free traveling libraries, better roads and intelligent practices, farming will then no longer be considered as an isolated life, but rather one of culture and refinement.

The fact that so many country people have been and are moving cityward, will soon be obviated when it is known that statistics show that in 1800 nearly 95 per cent. of the entire population of the United States was rural. At present it reaches about 36 per cent. However, the decrease from 1890 to 1900 was only about 2 per cent. and we hope to see an increase of population farmward by the census of 1910, with the present rapid removal of causes that tend to isolate life on the farm.

Perhaps among the most effective attractions that may be made about our homes, is the setting out of groves of trees. Such groves serve as windbreaks; they furnish shade and in pasture will shelter stock from hot sun in the summer and fierce storms in autumn and spring. Every effort possible should be made to encourage the growth of such trees as the elm, the maple, the basswood, the ash or any other spreading trees, in the pasture, near the road and around the farm buildings. Shrubs and flowers, too, should be planted where they will produce the best effect.

The benefit that comes from the taste and skill acquired in the work, will enable one to become more skilful, not only in beautifying the home and making it more attractive, but in making one more skilful in the raising of crops and animals on the farm. It will give one a better point of view of farming It is conceded that the most thrifty and successful farmers are those who have a love for the beautiful and who keep their lawns and shrubbery well trimmed; the fences in good repair, the tools and machinery in sheds, when not in use; farmers who do not allow weeds to grow on their farms and who remove from sight all rubbish and unsightly things about the premises. It is virtually with this class of farmers that love of order prevails everywhere. Thrift and beauty, self-reliance and patience about the farm home should go hand in hand.—J. F. WOJAT, in Breeders' Gazette.

Vegetables.

Green vegetables are less nutritious than roots, and are valued chiefly for their dietetic value and for their flavor. They are largely composed of water and cellulose, which makes them useful as laxatives. They contain, as a rule, about 90 per cent. of water, and only 1 1-2 to 3 per cent. of muscle-building materials. But their value in the diet cannot be over estimated. Taken individually, we find that most of them have a medicinal value, which, if fully appreciated by the public, would do much to decrease the alarming consumption of patent medicines, which at present prevails amongst our people.

ASPARAGUS is not a delicacy of recent date, but was highly valued by the Romans as long ago as 425 B. C. The green asparagus is considered the best variety, and may be grown to perfection among the vines in our maritime counties. It is only slightly nutritive, but contains a crystaline nitrogenous substance called asparagin, which produces marked physiological effects.

CABBAGE contains sulphur, and is, therefore, flatulent in effect. Boiling dissipates a good deal of the sulphur compounds and softens the cellulose, but cabbage is never so digestible as when young, and eaten raw, with vinegar, as with salads.

CAULIFLOWER is an inflorescence of a species of cabbage. It is the most delicate and digestible of all the cabbage products.

KALE, another cabbage plant, has rather an acrid flavor, but is delicate and easily digested.

BRUSSELS SPROUTS are little clusters of leaves, resembling cabbages formed in the axils of the main leaves, and are very good, being delicate in flavor and easily digested.

CELERY, either roots or blanched stems, are eaten raw, alone or in salad, or used to flavor soups, or boiled with cream sauce. The blanched stocks contain an aromatic oil, sugar, mucilage, starch, and also manose sugar, which is also found in honey, and is strong stimulants to the execretory organs. The daily use of celery as a salad is said to remove nervousness and palpatation of the heart. Onions have also the same effect and may be used when celery is out of season It is also used in rheumatism cases. This painful ailment will yield to the continual use of celery, prepared in the following manner.

Cut the celery into pieces and boil in water until soft. This "stock" of water should be drank by the patient. Put whole milk and a little flour and a grating of nutmeg into a sauce pan with the boiled celery; bring to the boil, and serve hot with pieces of toast.

LETTUCE is cooling and easile degested. It is a blood purifier and gently laxative in its action. The milky juice is somewhat narcotic and is sometimes used as a laxative.

ONIONS. All varieties are nutritious, and valuable as blood purifiers; also stimulate digestion, and, like celery, are useful for nervousness. "Personal equation" figures largely in the use of onions, as some persons cannot tolerate them at all, while others eat them with apparent relish.

GOURDS. In this group of vegetables we have pumpkins, vegetable marrow, squash and egg plant,—all of them being easily digested, but of low nutrient value. They have a good dietetic value, as the quantity of water they contain is so large.

CUCUMBERS.—Are chiefly of value for the water they contain.

MELONS are also valuable for the amount of water they contain, being more of a drink than a food.

TOMATO, itself the "prince of salads," is never better than when eaten fresh and raw. We have no other vegetable that is capable of being cooked and served in so many ways. The tomato owes its pleasant sour taste to oxalic acid, and on that account, like rhubard, is generally forbidden to those with gouty tendencies. Since oxalic acid forms insoluble salts with lime and magnesia, excessive use of rhubarb or tomatoes tends to thin the blood, and produce outbreaks on the skin.

JERUSALEM ARTICHOKES The tuber of a species of sun-flower, This is nutritious, easily digested; makes good soup. Should be stored in boxes of sand as it dries out quickly.

CARROTS are useful as blood purifiers; wholesome, but not very easily digested.

PARSNIPS are more nutritious than carrots and are best after a touch of frost.

TURNIPS are inferior in nutitrive properties.

RADISAES have a stimulating effect upon the excretory organs and act as demulcent; are often given to remove excess of mucus from stomach and bladder.

ASPARAGUS BOILED. 1 large asparagus. Immerse in boiling salted water and cook slowly for about twenty minutes,— drain and serve with the following sauce.

Cook together two tablespoonfuls of butter and the same quantity of flour without browning, add slowly stirring constantly, 1-2 cup of stock or water in which the asparagus was boiled and 1-2 cup of milk. Season to taste and pour over asparagus.

BEETS WITH THE SAME SAUCE. Boil till tender six small beets, drain and cover with cold water. Mix a cup of sugar, 4 tablespoons corn starch, 1-2 cup vinegar, 1-2 cup boiling water. Bring all to the boil and pour over beets. server either hot or cold.

CARROTS.—Boil twelve small carrots, drain and cut in slices, heat gently in melted butter, mix together 1 cup of white sauce and one cup of green peas and pour over the carrots, serve very hot.

HORSERADISH SAUCE. 3 tablespoons grated horseradish, 1 tablespoon vinegar, 1-4 tablespoon salt, dust of cayenne pepper, mix thoroughly and when ready to serve add 1-2 cup cream, whipped very stiff. To be served with roast beef.

BEAN SALAD. 2 cups cold beans mixed with two tablespoons tomato catsup and covered with 1 tablespoon capers, surrounded by one cup celery cut in nice pieces. Serve with cettie dressing.

CABBAGE SALAD. 2 cups of cabbage chopped, 1 cup celery, 1 teaspoon cloves or onions grated, 2 drops tobasco sauce of 1 tablespoon tomato catsup. Mayonnaise dressing.

SALAD DRESSING. 2 tablespoons butter creamed. Add one teaspoonful each of salt and sugar, 1-2 teaspoonful each of mustard and salt. Put into a double boiler. 2 yolks beaten slightly, add 4 tablespoons vinegar and butter mixture—cook till it thickens—and when cold add 3-4 cup whipped cream.

MAYONNAISE DRESSING. Put the yolk of one egg into a very cold basin, and 1-2 teaspoon salt and the same quantity of mustard, stir with a silver spoon till the consistency of soft butter, then add drop by drop 1 cup cold olive oil—stirring constantly—when this thickens add 2 tablespoons vinegar, and 1 tablespoon lemon juice, a few drops at a time.

PICKLES.

CHILI SAUCE.—18 large, ripe tomatoes, 6 onions, 6 small red peppers, 3-4 cup sugar, 2 cups vinegar, salt to taste. Peel the onions and tomatoes, remove the seeds and core from the peppers. Chop all very fine, add the sugar and salt, boil slowly until the sauce becomes quite thick; then put away in well sterilized bottles.

SPICED TOMATOES (Suitable for Game.)

Peel and slice the tomatoes and put them in the preserving kettle with sugar (half as much sugar as fruit, by weight.) A quart of vinegar and one ounce each of ground mace, clover and cinnamon. Mix and cook slowly for three hours. Put in glass jars and seal.

ROOTS AND TUBERS.

POTATOES. The value of the potato as food lies in its starch. It is very poor in nitrogenous material, and cannot be used alone to support life. Its deficiencies material, and cannot be used alone to support life. Its deficiencies in this respect are supplied by the more concentrated foods, rich in proteids and fats, with which it is usually served. Potato juice is acid containing many substances that tend to purify the blood, but the water in which potatoes have been boiled is not wholesome. That in which new potatoes have been boiled is especially so. Severe diarrhoea has been caused by the indiscriminate use of potatoes containing unformed starch and immature cellulose. Potatoes may be stored in pits, or in a cool, dark, well-ventilated cellar; light and frost both being injurious to potatoes, The addition of a pound of lime to each barrel of potatoes absorbs any unpleasant earthy odor. Exposure to light makes potatoes green, bitter and unwholesome. Potatoes taken too early from the ground are apt to heat and sprout when stored.

Absorb Onion Fumes

To prevent the discomfort from peeling onions, the following remedy I have found to be good. Cut off a square inch or so of new potato and stick it on the tip end of a knife you are to use to peel with. The potato absorbs the onion fumes and your eyes are safe.

M. V. K.

To whiten the hands and wrists, make a paste of pounded alum white of an egg, and a few drops of fresh lemon juice. Brush over the skin and when dry wear loose gloves for a time.

The Unity of the Home.

How I wish that it were written over the entrance of every home: "A House Divided Against Itself Can Not Stand." If a home is to be durable and prosperous, there must be unity between husband and wife.

What is more attractive than to see a husband and wife, always agreed, true companions—sharing each others joys, bearing each other's cares, letting every thought be common property?

What is more disgusting than where it is assumed by the husband that his business is entirely his own—that his wife is entitled to know nothing about it? Such a household is a rope of sand, the least touch of disaster breaks it asunder. Here has seemingly been a home, but only the false shadow of a real home.

When by two young people a household is established, it should be clearly understood from the beginning that there is a community of interest, that what concerns one concerns both, that secrecies are disastrous. The world is full of this dangerous division of interest in the family.

God in the beginning, proposed as it was not meet for men to be alone, to make a helpmeet for him. If men would only be ready to make their wives helpmeets by confiding to them their business and consulting them, expecting to work together, for private and public interest; then not only would fast living be far less common, but the lives of women would be less frivolous, less anxious and more useful.

Two are better than one, says the Scriptures, but how can two walk together unless they be agreed? My opinion is, that the most prosperous people in the land are those where unity dwells in the home, and where the husband and wife are fully agreed in every undertaking, from training the smallest child, to loving each one's mother.

Now, loving each other's mother may not seem an undertaking, but from observations, it seems to be a difficult something. I see a very few people who are really devoted to their mother-in-law. I think there is less common sense shown about relatives by marriage than about any other subject. Why must a young man be prejudiced against his mother-in-law as his natural enemy? If she loves his wife and is solicitous for his welfare, she loves and guards what is his dearest treasure, and thus has a claim to his gratitude and in that wife's well-being is freighted the happiness of his home. If there are some of her ways that are not pleasing to him, very likely that account is squared without any effort of his ways being unpleasant to her. Has she not loved and nourished the being dearest to him? If the daughter is charming, does she not probably owe it to her mother? Must not that be a praiseworthy woman who has so carefully reared you a good and noble wife? And if your wife is good and sacrifices lots of things for your pleasure, why cannot the husband make one sacrifice and be as kind and pleasant when his mother-in-law is present, as he can in the presence of other ladies?

I have seen men who could be polite to other women, but when the wife's mother came in they appeared to act as disrespectfully as they possibly could to womankind. Now, don't you know, they were piercing a wound in the bosoms of their sweet wives?

A Constant Reader,
Northumberland Co., N. B.

That Boy of Ours.

The brightest star in our parental crown is our boy. How sweetly we cherish the first articulations of the prattling tongue and how cheerfully and gladly we watch the first efforts of his staggering little feet. It is at this juncture that, parentally, our air castles begin to form, we begin to silently muse that in a sweet day to come he will fill some official position of honor and credit, such as mayor, squire, sheriff, judge, representative or congressman. Then there is the shuddering sensation that the chair of the Governor and President must be filled and some mother's and father's baby boy will fill them.

This sweet springtime picture has two sides—bliss on one side, sorrow on the other. A road to a crown of honor—a diadem of woe. Parents alone know these two roads. There is a juncture in the boy's life where the forks of this road are encountered. The right hand road is paved with good deeds, industry, thrift, morality, courage, labor, proper hours, courtesy, attention, religion, etc. The other is paved with immortality, late, irregular hours, strong drink, swindling, embezzlement, forgery, gambling and general debauchery.

The former is full of labor and pull, alertness and determination. The latter is to turn loose and fall.

Has our boy come to this fork of the road? If so, what? Just here is where parental "bumfuzzlement" begins. The boy begins to assert his rights, make his demands and execute them. The loving parent begins to indulge; "O how I love my boy! I can't deny him just this little concession." This concession begats more and similar concessions with the rapidity of arithmetical progression. The links of the chain are formed and the boy's character is forged. Often the making of two chains is started—one link welded in the good—two links in the bad.

Let us stop and ponder well. Do we love our boy rightly when we make concessions and indulge the innocent lad? No! decidedly! The tender, sweet-hearted boy does not know anything but what he has been taught, therefore, how can he be responsible for the deeds he does? Where, then, does this responsibility rest? Directly on the shoulders of the father and mother. What is to be done in the premises? Place this boy on the road to honor, stand behind him and see that he stays in the middle of the road. If it takes the most rigid discipline, exercise it. Remember, parents that every day you are farther from the forks of the road and that your parental watchfulness will be less needed as the boy's chain of character is forged.

When time-honored hairs of silver gray deck our temples, how proud will we be to present such a boy to the world and say: "This is the crowning effort of my life, the transformed prattling babe of former days." How gladly the smile of declining days will play over our time worn cheeks as we commend our treasure to the world to begin where we leave off. Then our boy will be a solid rock of support for our evening years, and a joyous treasure to leave behind as we take our flight to the great unknown.

If we allow our boy to go to the other road, what? The story is more easily imagined than told. The pain is great enough without a word picture.—Uncle Josh, in Farm and Ranch.

Not Wash-Day—But Wash-Hour

The woman, who uses THE "NEW CENTURY" has the clothes on the line and is ready for her morning shopping or recreation—when other women are still toiling over the tubs in a hot kitchen.

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Cheerfulness.

Cheerfulness is like a sunny day, it sheds its brightness on everything around us. No trait of character is more valuable, or more productive of happiness, than cheerfulness; it lightens our burdens, multiplies our friends and promotes our health.

Cheerfulness may do much to lighten our burdens, and thus make life happy. Times may be hard, but wearing a sad and gloomy countenance will make them no easier. It is sunshine, not clouds, that brings out the flowers. Sorrows will surely come, but softened by the hopeful views of a cheerful disposition, they appear less fearful and less depressing.

Cheerfulness makes the air seem more balmy, the sky clearer, and even the sunshine more beautiful; while gloominess is a mildew that blights our talents, blasts our happiness and beclouds our life.

Again, social intercourse is one of the chief sources of our happiness, and nothing so fits us for the enjoyment as cheerfulness. The possessor of this frame of mind is not only free and easy in conversation and manner, but has his imagination clear and his judgment undisturbed. He is disposed to be polite and obliging, and naturally awakens similar feelings in those with whom he comes in contact—as the soft rain falling gently on the earth, penetrates the soil and endues all nature with freshness and beauty, so the influence of his genial disposition permeates all hearts and fills them with joy and gladness; in this atmosphere of happiness that he has created, he breathes the sweetest joys of life.

Cheerfulness not only lightens the burdens of life and increases social pleasures, but it also promotes health. It affects beneficially, not the mind alone, but likewise the body. If in ill health, we give way to repining, we encourage the malady; while, if we brace up, we banish our fretful passions and with them a large part of our trouble. If we continually worry over our sorrows, we cause our mental faculties to become dull and languid; so, if we keep in mind our bodily afflictions, we imperceptibly injure the delicate nerves and tissues of our bodies. On the contrary, if we banish all thoughts of our ailments or troubles, we raise our spirits and promote our health.

Seeing, then, that cheerfulness is productive of so much happiness and good, let us endeavor—no matter how dark the gloom may be—to help brighten it by smiles.—CARRIE E. GUY.

Three Good Answers to the Questions.

WHAT IS GOOD HOUSEKEEPING.

FIRST ANSWER.

Good housekeeping is the art of making the home restful, cheerful, comfortable and clean. Of ministering to heart, mind and body in a reasonable, common sense way; giving a variety of careful chosen, well-cooked food, and making details of meals and service either simple or luxurious, according to the family income.

SECOND ANSWER.

Good housekeeping is the "gift of God" by which some women transform a house into a home. It is more than a knowledge of the chemistry of cooking, more than the care of silver, china, hardwood floors or bric-a-brac, though it may include all these. It is that subtle something by which order, cleanliness, beauty and comfort are made to reign simultaneously in the home.

THIRD ANSWER.

By good housekeeping I mean all that which, planned and carried into effect by the home makers, aims to so control the physical, direct the mental and influence the spiritual life of every member of the household, that he or she may reach the highest possible plane of usefulness and happiness.

Lemons.

Lemons are very useful in health and sickness. Hot lemonade is one of the best remedies for an incipient cold. It is also excellent in cases of biliousness. For malaria the "Roman cure" is prepared by cutting the rind and pulp of a lemon into a pint of water, then boiling until there is only a half pint. One teaspoonful is taken before each meal. This has cured obstinate cases when quinine failed. Lemon syrup made by baking a lemon twenty minutes and then squeezing the juice upon half a cupful of sugar is excellent for hoarseness and to break up a cold. Tie a piece of lemon on a corn at night for five nights, leaving it on all night. Soak the foot in warm water and the corn can be easily removed. When the root of the corn is taken out cover the toe with collodion or some other preparation to protect the skin, which will be sensitive. Unless the tender skin is protected it will soon form another corn. A piece of cotton saturated with vaseline and put over the toe will doubtless protect it just as well.

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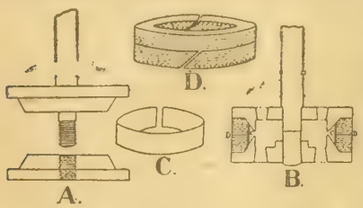

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FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N B.

A FARMER reader at Lower Newcastle, N. B., wishes to know what to do with Chrysantheum when done blooming.

ANS.—This plant exhausts its vitality in blooming and should be cut down to the pot and roots put away in a dark, cool place, until February, keeping it on the dry side, then bring to light. Water and root sprouts will come up, from which, when a few inches high, take cuttings and root them in moist sand or soil. These cuttings will give you good blooming plants next autumn, but must be kept growing, without check, from start to finish, to give good bloom.

Another reader wishes to know when stimulants or plant food should be given plants. I have answered this several times, but will again give my opinion. No plant in pots or boxes should be given food or stimulants until the ball of soil is crowded with roots and nearly exhausted of food. To feed a plant when it has already sufficient food, is to invite disease. At this season of the year, dark weather and short days, no stimulants should be given, except in cases of some strong, rank growing plant, that is wholly root bound. Better wait until the February sun gives light enough to enable the plants to assimilate more food, and in watering the plants during the dark period, it is also better to keep on the dry side, unless your plants are kept in a high temperature. If you have a plant crowded with roots, that needs moving, and it is not convenient to repot it into a larger pot, wash (not shake) all the soil off the roots and repot, with fresh soil, into the same or a smaller pot.

As soon as your forcing bulbs are thoroughly rooted and ready to bring to the light, see that the drainage is perfect in each pot or box, as, if it is stopped, they will rot. If kept moist, they should be in full bloom. Keep them cool during forcing—a high temperature gives poor bloom. Give all the air you can to all your plants.

In answer to FARMER reader of Hampton, Dalhias can be wintered in any position in which potatoes will keep well. Keep in a cool, dry position, free from frost.

If you have covered your tubers with earth, in a cool position, free from moisture, they will keep all right, but will start to grow early in the spring. If moisture can reach them in the soil, they may rot. Look at them and care for them now.

Roses grown in houses in winter need air and all the sun you can give them and good drainage. Spray or wash the foliage every sunny day, to guard against red spider and never let them wholly dry out. When in active growth, keep moist, but do not let water stand under the pots in saucers. This last applies to all plants not aquaties.

In answer to Oban, C. B., the insect on your Chrysanthum is Aphis. Make a large paper cone, place over plant, cut a few ounces of tobacco fine, moisten it and burn on coals, held so the smoke will go under the cone. This will kill them; or make a strong tea of the tobacco and dip your plant in or spray it on the plant repeatedly.

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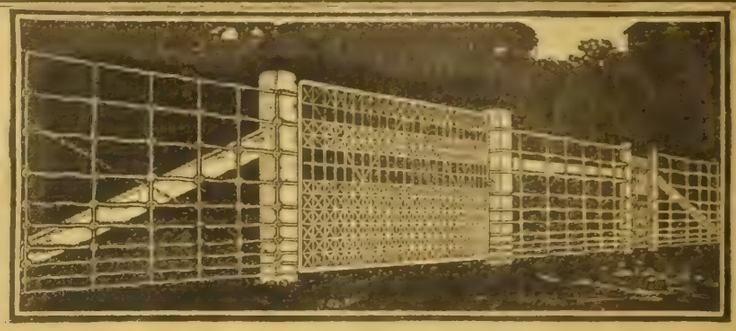

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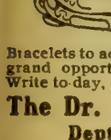

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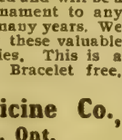

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Bowmanville, Ont.

The Georgetown Seed Fair

The first Seed Fair for Kings County, P. E. I., was opened in the hall at Georgetown on Monday, March 7th, by His Honor Lieutenant Governor McKinnon.

As the judges proceeded with the placing of awards in the hall the afternoon program was carried out at the Court House. Hon. John Richards, Commissioner of Agriculture presided. He congratulated the people on holding the Fair and spoke of the benefits resulting from the selection and use of good seed and the necessity of growing our own seeds. He also made special reference to the growing of clover seed saying that if there were a sufficient number of farmers went into the growing of the clover for seed that the department would consider the assisting in geting a clover huller, an expensive machine indispensable in the cleaning of clover seed.

J. E. Sinclair was the next speaker. He gave an account of agricultural methods as practised in Denmark especially the hog raising industry and its relation to dairy farming.

J. A. Clark, Superintendent of the Experimental Farm, gave a description of what he intends doing in the farm along experimental lines. He spoke on the "Benefit and Value of Good Seed to the Farmer" describing in detail the methods used for prevention of smut in grain recommending a solution composed of 1 pint formalin to 40 gallons water, enough to treat 50 bus. oats.

At a meeting at the hall at 5 p. m. the judges explained reason for placing awards under different exhibits. S. J. Moore, Truro, assisted by J. A. Clark, judged the oats and timothy; R. Robertson Superintendent of the Experimental Farm at Nappan, N. S., Judged potatoes and Donald Innis, N. B., wheat and barley.

The evening session met at 7 p. m. with Mr. Annear, President of the King's County Exhibition Association in the chair. First was an address given by His Honor Lieutenant Governor McKinnon followed by Hon. John Richards, Hon. Laughlin McDonald, Murdock McKinnon, M. L. A., Hon. J. D. Innis. On arrival of train from Charlottetown, Premier Hazzard and J. A. Matherson arrived and made stirring addresses.

The Premier emphasized the necessity of eradicating weeds from the farms as an essential step towards producing pure seed.

Prof. Ross then gave a stirring and enthusiastic address urging the farmers to stop the short sighted policy of selling their farms away in pieces by exporting oats and other raw products.

Prof. Robertson, of Nappan, followed in an earnest speech, that in his opinion successful farming should have live stock as the basis of the operation and that a short rotation of crops was very essential to successful live stock farming.

Meeting closed with a vote of thanks to chairman and the singing of the National Anthem.

WHEAT WHITE FIFE, 1, Jas. Hewitt, Lower Montaque; 2, John Slown, Lower Montaque; 3, Geo W. Aitkens, Lower Montaque; 4, Mont Annear, Lower Montaque.

WHEAT, WHITE RUSSIAN, 1 Edward Poole, Lower Montaque; 2, Richard Creed, Albion; 3, Cassins Clay, Dundas; 4, Andrew Redmond, Cardigan.

OATS, BANNER OR DANISH, 1, Richard Creed; 2, Geo. Parker, Georgetown Royelty; 3, Geo. Annear, Lower Montaque; 4, Henry Green, Cardigan.

OATS, GOTHLAND OR EGYPTIAN, 1, D. P. Ross, Lower Montaque; 2, Nathel Westaway, Albion; 3, R. Creed; 4, Ed. Poole.

20TH CENTUEY OATS, 1, R. Reed.

TARTER KING OATS, 1, Mont Annear, 2, John Annear.

A. O. V. WHITE OATS, 1, R. Creed; 2, Roy Bulpitt, Cardigan; 3, Nathan Conrad, Sturgeon; 4, Jas. Hewitt.

OLD ISLAND BLACK OATS, 1, Geo. W. Aitkens, 2, Peter Vineau, Rollo Bay, 3, John McKinnon, Rollo Bay; 4, Cassins Clay.

A. O. V. BLACK OATS NAMED, 1, Geo. Keenan, Georgetown Royalty, 2, (Benj Sickles, Whim Road; 3, M. Keenan, Georgetown Royality; 4, Martin Corcarn, Baldwin's Road.

BARLEY, SIX ROWED, 1, R. Creed; 2, Jas. Howlett, Gowan Brae; 3, Geo. W. Aitkens; 4, J. Mort McLean, New Perth.

BARLEY, TWO ROWEE, 1, Geo. Keenan; 2, Neil McKenzie, Gasperaux; 3, E. Poole; 4, G. W. Aitkens.

BUCKWHEAT, SILVER HULL, 1, E. Poole; 2, F. G. Bovyer, Georgetown Royalty.

BUCKWHEAT, A. O. V., 1, J. Mort McLean; 2, F. G. Bovyer.

FIELD PEAS, 1, R.Creed.

FIELD BEANS, 1, Orman Poole, Lower Montaque.

FLAX, 1, Edward Bulpitt; 2, R. Creed.

TIMOTHY SEED, 1, John Slown; 2, Horace Parker, Cardigan, 3, Richard Creed; 4, John Annear.

FODDER CORN, 1, R. Creed.

CLOVER SEED, 1, Jas. Howlett.

MCINTYRE POTATOES, 1, Cassins Clay; 2, Peter Vineau; 3, Geo. H. Parker, Goretown Royalty; 4, Mort Annear; 5, C. H. Pool, Lower Montaque; 6, Martin Corcoran, Baldwin's Road.

GREEN MOUNTAIN POTATOES, 1, Orman Poole; 2 James Howlett, 3, J. M. McLean; 4, F. G. Bovyer.

OTHER WHITE VARIETY POTATOES, 1, Orman Poole; 2, J. Slown.

ROSE TYPE POTATOES, 1, Cassins Clay; 2, G. W. Aitkens; 3, Orman Poole; 4, Martin Corcoran.

DAKOTA RED POTATOES, 1, Jerome McLean DeGross Marsh; 2, Jas. Howlett, 3, J. M. McLean; 4, Joseph Deagle, Rollo Bay.

BEAUTY OF HEBRON, 1, J. Mort McLean; 2, John Sloane; 3, F. G. Bovyer.

OTHER LATE VAEIETY, 1, John Sloan; 2, Neil McKenzie.

OTHER EARLY VARIETY, 1, R. Creed; 2, G. W. Aitken, 3, J. McLean.

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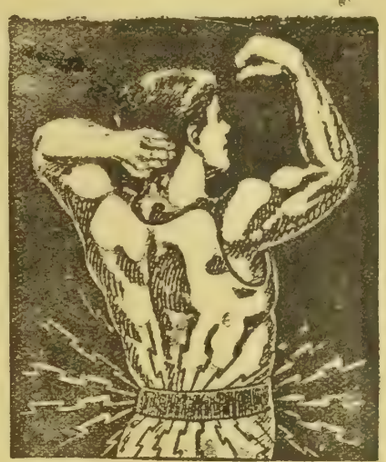

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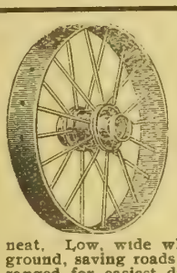

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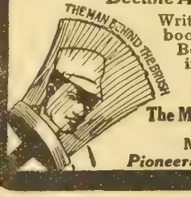

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Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Prize Winners at The St. John Poultry Show.

Note—C. cock; h. hen; r. cockerel; p. pullet; n.f. pen fowls; n c. pen chickens.

BARRED PLYMOUTH ROCKS, Walter McMonagle & Sons, 1 and 2 c; 1, 2 and 3 h; 1 and 2 r. and 1, 2 and 3 p; 1 n f; 1 and 2 n. c; F. V. Hamm; 3 c, Frank Josslyn, St. John, 3 r; 3 n c.

WHITE PLYMOUTH ROCKS—Greenwich Poultry Yards, 1 c; 1 h; 1 and 3 r, A. E. S. Hatfield, St. Martins, N. B. 2 r; 1 p, James Sterling, St John, 1 n f, Alfred Burley, West St. John, 2 c; 2 h, F. V. Hamm, 3 h.

SILVER WYANDOTTES —P. Killorn, St. John, 1 and 2 p; 1 n f, R. A. Knight, Moncton, 1 c; 3 h; 1 r, 3 p, H. C. Lemmon, 1 and 2 h; 2 and 3 r.

GOLDEN WYANDOTTES, Geo. H. Seaman, 1 c; 1, 2 and 3 p, H. C. Lemmon, 2 c; 1 h.

WHITE WYANDOTTES, J. V. Jackson Moncton, 1 c; 1 h, P. Killorn, St. John, 3 p. Walter McMonagle & Sons, 2 c; 2 and 3 h; 1 and 2 r; 1 and 2 p; 1 n f; 1 n c.

BUFF WYANDOTTES, Walter McMonagle & Sons, 1 c: 1 h; 1 r; 1, 2 and 3 p

COLUMBIAN WYANDOTTES, Greenwich Poultry Yards, 1 c, 1 p. J. W. Litteney, St. John, 1 and 2 r; 2 and 3 p.

S. C. RHODE ISLAND REDS, Miss Brown, St. John, 1 r; 1 and 3 p. Frank Josslyn, 1 h. 3 r. Walter McMonagle & Sons, 2 c; 3 h; 2 r; 2 p; 1 n c Alfred Burley, St. John, 3 h; 2 p; 3 n f.

R. C. RHODE ISLAND REDS, H. L. Holman, St. John, 1 and 2 r; 1 and 3 p; 1 h, John O'Leary, 1 c. Frank Josslyn, 3 r; 2 p.

R. C. BROWN LEGHORNS, John A Scott, St. John, 1 c; 1 h; 1 r; 1 p. H. C. Lemmon, 2 p.

S. C. BROWN LEGHORNS, Walter McMonagle & Sons, 2 c; 2 and 3 h; 1 and 2 r; 1, 2 and 3 p; 1 and 2 n c, Rockwood Poultry Yards, St. John, 3 r. John E. Warren, St. John, 1 n f; 3 n c Kilnview Poultry Yards, 2 n f. John A Scott, St. John, 1 c; 1 h.

S. C. BUFF LEGHORNS, J. V. Jackson, 1 r; 2 p. Daniel Doyle, 1 p. H. C. Lemmon, 1 c; 1 h.

R. C. BUFF LEGHORNS, J. V. Jackson, 1 c; 1 h; 1 r; 1 p

S. C. BLACK LEGHORNS, J. A. Scott, St. John, 1 and 2 p.

R. C. WHITE LEGHORNS, Greenwich Poultry Yards, 1 p, Daniel Doyle, 3 c; 2 and 3 h. H. C. Lemmon, 1 and 2 c; 1 h.

S. C. WHITE LEGHORNS, James S. Lyons, St. John; 3 c; 2 p. D. McLaughlin, St. John, 2 p. J. W. Letteney, 1 h, C. McBeath, St. John, 2 c; 2 h; 1, 2 and 3 r. John O'Leary, 1 c; 3 h; 1 p; 1 n c.

S. C. BLACK MINORCAS, R. B. Stewart, Moncton, 1 r. James Sterling, 2 p. Hillside Poultry Yards, 1 c. A. E. S. Hatfield, 2 n f; 1 n c. E. C. Wilson, St. John, 3 n c. J. W. Letteney, 2 c; 1, 2 and 3 h; 1 p. F. V. Hamm, 3 r; 3 p. Kilnview Poultry Yards, St. John, 2 r; 1 n f; 2 n c.

BUFF COCHIN BANTAMS, J. V. Jackson, 1 c; 1 h; 1 r; 1 p. H. C. Lemmon, 2 r; 2 h.

WHITE COCHIN BANTAMS, H. C. Lemmon, 1 r; 1 p.

BLACK COCHIN BANTAMS, J. V. Jackson, 1 r; 1 p. Geo. H. Seaman, 2 r; 2 p.

S. S. BANTAMS, H. C. Lemmon, 1 c.

BLACK TAIL JAPANESE BANTAMS, J. V. Jackson, 1 h; 1 r.

S. C. BUFF ORPINGTONS, Kilnview Poultry Yards, 1 and 2 c; 1 and 2 h.

LIGHT BRAHMAS, Harold Hannah, St. John, 2 n c.

DARK BRAHMAS, John E. Warren, St. John, 2 and 3 r; 1 p. Hillside Poultry Yards, 1 c; 2 p.

S. S. HAMBURGS, Alfred Burley, St. John, 2 c; 2 h; 2 and 3 r; 2 p.

R. C. BLACK HAMBURGS, J. A. Scott, St. John 2 and 3 p. H. C. Lemmon, 1 p.

BLACK LEGHORNS, P. Killorn, St. John, 1 r; 1 p, H. C. Lemmon, 1 c; 1 n c.

GOLDEN DUCKWING BANTAM, J. A. Scott, 2 h.

WHITE GAME BANTAMS, J. A. Scott, 2 h.

BLACK JAVAS, Hillside Poultry Yards, 1 h.

CORNISH INDIAN GAMES, Hillside Poultry Yards, 1 c; 1 h; 1 r; 1, 2 and 3 p.

BLUE ANDALUSIANS, Daniel Doyle, 1 c; 1 h; 2 and 3 r; 1 and 2 p H. C. Lemmon, 2 h; 1 r; 3p.

WHITE INDIAN GAMES, Daniel Doyle, 1 c; 1 p.

WHITE FACE BLACK SPANISH, J. A. Scott 1 h.

PIGEONS, H. C. Lemmon, 1st on 3 pairs of different varieties.

TURKEYS BRONZE, Rockwood Poultry Yards, 1 r; 1 p.

PEKIN DUCKS, J. V. Jackson, 1 drake, 1 duck.

RABBITS, WHITE, Harold Hannah, St. John. 1 pr.

Tried and Proved Receipes.

WHEN REPLACING A CANE SEAT—Old chairs take on a new lease of life when fiber seats replace worn-out cane ones, but these seats so easily tacked on with brass-headed naiis, do not always fit. I cut a paper pattern to fit the chair and paste it on the bottom of the fiber seat, which I then take to a shoemaker to trim to the right size.

CHEESE STRAWS.—Chop finely with a silver knife one tablespoonful of butter with a cup of flour, add a half-teaspoonful of paprika and a cup of grated cheese; add enough water to make a stiff paste. Roll out very thin and cut into even strips about half an inch wide and six or seven inches long. Place on a wet tin and bake in a very quick oven; immediately upon removing sprinkle with salt.

SOFT SUGAR COOKIES.—Cream together a cup of sugar and half a cup of butter; add to this one egg beaten to a stiff froth, five tablespoonfuls of milk, small teaspoonful of baking powder, the juice of one lemon and sufficient flour to make it of rolling consistency, but yet as soft as possible. Do not use any more flour than can be helped. Handle as little as possible and bake it in a quick oven. They are delicious.

MONKEY FACES.—Cream together one half cup of butter and one cup of sugar, add to this two eggs beaten to a stiff froth, a cup of molasses with two teaspoonfuls of soda mixed in it, a cup of cold water, a teaspoonful of cinnamon, one of cloves and five cups of flour. Beat well together and then drop from a tablespoon upon tins; add three raisins for the eyes and nose after the batter is in place, and then bake in a fairly quick oven. Children delight in them.

A Safeguard As Well As A Cure

The trouble with most cough medicines is that they relieve the cough simply by soothing the local irritation. They help Nature very little in *curing* the inflamed conditions, and do nothing at all toward *strengthening* the weakened parts.

Father Morriscy's No. 10 does all three. It *stops* the cough by clearing away the mucus and relieving the irritation in the passages—it *cures* the inflamed and congested membranes lining the throat and lungs—and it *strengthens* the whole system, and particularly the parts that have been weakened.

Thus it is that No. 10 not only cures the present trouble, but prevents its return.

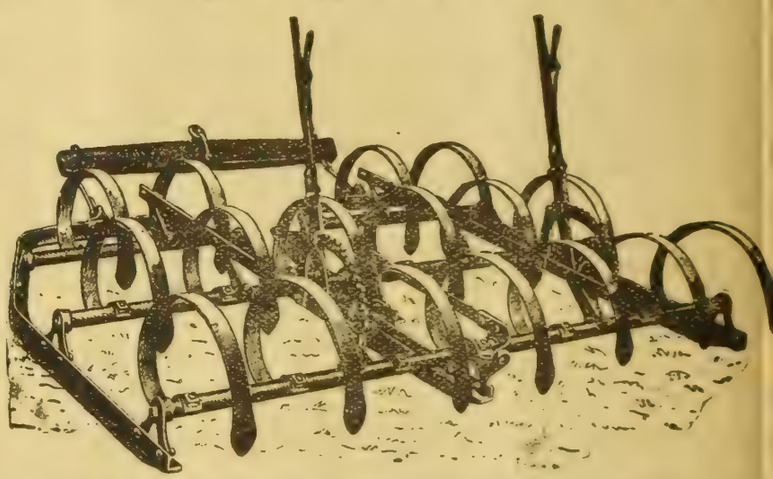
Hundreds of men and women who were broken down with coughs and colds, and either on the verge of consumption or actually in its grip, are now strong and well, thanks to Father Morriscy's No. 10 and careful living.

Trial size 25c. Regular size 50c.

At your dealer's. 106

Father Morriscy Medicine Co., Ltd., - Chatham, N.B.

Lever Spring Tooth Harrows



The finest harrow made. Teeth can be adjusted in the field to any depth, and work regulated as required. Saves largely on labor and does more effective work than any Harrow on the market. Highly recommended by progressive farmers who have them in use.

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Bailey-Underwood Co., Ltd., New Glasgow, N. S.

Molassine Meal

The unique and wonderful food for

Horses, Cattle, Sheep, Pigs, & Poultry

Are you using it? If not you are behind the times.

—SOLE IMPORTER—

Andrew Watson.

91 Youville Square, - MONTREAL.

A useful stove blackening (liquid) is composed of one gill of turpentine, one pound of black lead (pulverised), one gill of water, and one ounce of sugar.

A piece of flannel wrung out of boiling water and sprinkled over with turpentine will often give a cold relief, if laid on the chest.

BE PREPARED FOR THE HARVEST WITH THE RIGHT MACHINE

YOU cannot afford to run any risk of delay at harvest time. Every minute counts when the grain is ripe for cutting. Every minute of delay due to a slow, inefficient bungling or broken-down machine will rob you of a part of your just reward. Let the harvest find you prepared. Start today to look over your equipment. Face the question squarely.

Is it going to permit you to get all the profits from your acres. If it is not—now is the time to choose the machine that will. Because you are going to be busier every day from now on.

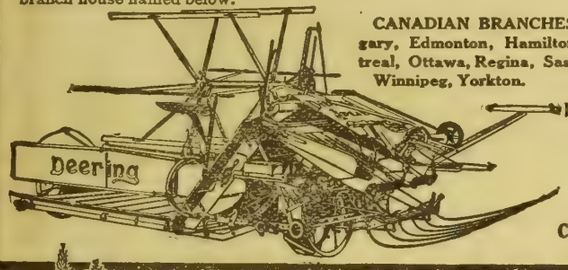
We want you to take proper time to make your selection because we know if you do you'll want a Deering. It's one of the best machines for your use. It's built to meet the conditions encountered on Canadian farms.

It will get all your grain no matter if it is tangled or down in the shortest possible time. It has strength, a wide range of adjustment for all conditions of grain and ground surface, and the draft is as light as it is possible to secure in a perfect working binder.

It is a proved machine. It has been in use for more than a generation, and its superior has never been produced. You cannot make a mistake in purchasing one. The Deering line comprises—

Harvesting Machines, Binder Twine, Mowers, Tedders, Hay Rakes and Side Delivery Rakes, Hay Loaders, Disk, Shoe and Hoe Drills, Cultivators, Seeders, Smoothing, Spring Tooth and Disk Harrows, Land Rollers, Scufflers. Deering agents also handle Gasoline Engines, Cream Separators, Hay Presses, Wagons, Sleighs and Manure Spreaders.

Call on the local agent for catalogue and particulars on any Deering machine or implement, or write the International Harvester Company of America at the nearest branch house named below:



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INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated) CHICAGO U S A

This Serviceable "Swiss" Army Rifle For $3.50

We have in stock about twenty of these "Swiss" Army Rifles which we would like to dispose of. Having purchased a large number of these rifles for premium purposes we necessarily got them at a bargain and are now offering them to you at wholesale prices. The shooting season is over and we do not want to carry so many in stock. They retail at all hardware stores for about $6.00 each. Ammunition for these rifles is cheap and can be obtained at almost any hardware store in the provinces. If your dealer does not keep it we can get it for you- Every farmer should have a rifle and this is your opportunity. Better send for one to-day. They will not last long at the price quoted, $3.50. Orders filled in rotation. If all are sold when your order is received money will be refunded. Order to-day. Cash must accompany order. If you send check add 25c for exchange.

The Maritime Farmer
SUSSEX, - N. B.

Please mention this paper when writing advertisers.

Prince Edward Island Provincial Seed Fair.

(Continued from page 309.)

length and breadth of the land spreading the good work that must necessarily ensue from the gathering together of our good ladies for helpfulness in maintaining and upbuilding our homes.

Mayor Morrison, of Summerside, extended in behalf of the town a hearty welcome to the visitors.

HIS HONOR LIEUTENANT GOVERNOR MCKINNON.

was present and delivered an encouraging address. In regard to agricultural education, he said it had two objects in view viz: improvment of quality and improvment of where education was applied to our every day practical work. He gave some comparative crop statistics which showed that Prince Edward Island was more than holding her own with the other provinces of the Dominion. He thought there should be more co-operation in the ownership of expensive farm machinery and that more of the implements used should be manufactured in Prince Edward Island.

BETTER SPEND $1.00 ON YOUR BOY IN EDUCATION THAN LEAVE HIM $10.00.

American Consul Deedmeyer was present and said that the uneducated man was almost sure to lose in the race, consequently it behoved farmers to give their boys and girls every possible educational advantage. It was much better to spend one dollar on the education of a boy than to leave him a legacy of ten dollars. Children should be trained to study a certain number of hours each day and to work onwards and upwards along moral and intellectual lines.

After short addresses by Hon. Mr. Mathieson, Hon. John Richards, Prof. Cumming, Hon. Mr. McLean, and Hon. Mr. McDonald the meeting closed.

THE WOMENS CONVENTION.

The Womens Convention was held in St. Pauls Hall on Thursday, March 10th. Mrs. R. T. Holman acted as chairman and the following proggramme was carried out:

"Talk on Beef Cuts': by Miss Grace Dutcher, Charlottetown.

"Arts and Handicrafts in the Home" by Miss Carrie Holman.

"Home Sanitation" by Miss Katie James, Summerside.

"Labor Saving Devices" by Miss Dutcher, and an address by Mr. Deedmeyer. Some interesting discussion took place, the meetings were largely attended and all felt that the day was profitably spent. Some of the addresses will appear in future issues of the Farmer.

EXPLANATION OF AWARDS.

The explanation of awards and auction sale took place on Friday morning. The explanations as well as the prices realized at the sale were considered very satisfactory. Owing to the danger of getting different varieties and strains of seed grain mixed it was resolved that in future a glass quart jar accompany each entry. The judges will label the jars and fill them from the respective bags after which the bags will be tied. The respective samples in the jars can then be examined without incurring the liability of intermixing the grains. After the passing if this resolution the 1910 seed fair was closed.

Equal parts of water and vinegar rubbed into the hair one half hour before washing will take out the dandruff. Rub the same occasionally well into the scalp at bed time.

SEED OATS.

Start in right now as a seed grain grower. Use every care in preparing the soil. Procure some of our Regenerated Banner Scotch grown Oats, and you will find that not only will you increase your yields by 10 to 30 per cent. as our last year's customers did, but also will your neighbors come to you each season for your seed, and pay you high prices. It costs no more in land, labor, horse flesh or machinery to grow our best seed than common run-out seed, but the prices and yields obtainable are very different. We offer these oats, while the stock lasts, freight paid, at **$1.50** per bushel, in 5 bushel lots. Bags free. Send for samples also catalogue.

Clovers & Timothy

Below find our present prices for guaranteed **No. 1 Government Standard** Clovers and Timothy, delivered, freight paid, at your nearest station, provided you order 200 lbs. or over. Bags 25c each extra.

Send for Samples.

Red Clover, "Sun" Brand, at $11.00 per bushel, (60 pounds.)
Red Clover, "Moon" Brand, at $10.25 per bushel, (60 pounds.)
Mammoth, "Sun" Brand, at $11.00 per bushel, (60 pounds.)
Mammoth, "Moon" Brand, at $10.52 per bushel.
Alsike, "Ocean" Brand, at $9.50 per bushel.
Alfalfa, "Gold" Brand, at $13.40 per bushel.
Timothy, "Diamond" Brand, at $3.75 per bushel, (48 pounds.)
Timothy, "Crescent" Brand, at $3.25 per bushel, (48 pounds.)

Geo. Keith & Sons,
124 King St East., - Toronto
Seed Merchants since 1866

THE DOMO SEPARATOR

The Cheapest and the Best

Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties.
For particulars of Free trial offer write to

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Agents Wanted all over the Maritime Provinces

OUR DIAMOND JUBILEE YEAR

Sixty Years of Success is the Record of Eastern Canada's Greatest Mail Order House.

JUST SIXTY YEARS ago, this house was established by the late Mr. Z. Paquet, whose name is now a household word in every home in Eastern Canada. For sixty years we have continued to develop and prosper to such a degree that to-day we can offer you greater advantages in buying than you can secure anywhere else in this country. This is no idle boast—WE CAN PROVE IT. Our great FREE DELIVERY OFFER is the broadest and most generous offer ever made in Canada. The new PACQUET CATALOGUE for Spring and Summer, 1910, is now ready. Write for a copy TO-DAY! A postcard will do—you'll get the catalogue by return mail.

SPECIAL—French Kid Gloves

No. 949-M.—Ladies' Real French Kid Gloves, two dome fasteners, black, white or tan, every pair GUARANTEED, beautiful, thin, soft, pliable kid, fine finish, matchless value. Examine these carefully in your own home, and if you don't find them worth $1.00 return them at once and we will refund your money, together with the return postage. PAQUET SPECIAL Price, per pair ...79C

19¢

SPECIAL—Hose Supporter

No. 983-M.—This special Hose Supporter is made specially for our trade, and the value is exceptional. Moire pad with belt, plain lisle elastic garters, protected fasteners and fine rubber buttons. We will send this PREPAID to your address on receipt of price, and if you are not satisfied that it is worth, at the very least, 30c, return it at once, and we will refund your money. PAQUET SPECIAL Price, only.....19C

This Beautiful Guipure Lace Collar Prepaid to Your Address for Only 19c.

No. 978-M.—This handsome Guipure Lace Collar, exactly like the illustration will be sent, PREPAID, to any address in Canada, on receipt of this remarkably low price. The length is 14 inches, and the height is 4¼ inches on the sides and 2¼ inches in front and back. You may have your choice of White, Cream or Black. Examine this Collar carefully in your own home, and, if you don't find it the best value you were ever offered, return it at once and we will refund your money, together with the return postage. PAQUET SPECIAL Price, only.....19C

THE PAQUET COMPANY LIMITED.
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SPECIAL—Ladies' Handbag

No. 964-M.—This Handbag, exactly like the illustration, fine imitation of Seal Grain Leather, black or brown, gilt mounted, ball clasps, best quality glazed lining, is another proof of the Paquet Value Supremacy. On receipt of this remarkably low price, we will send you this Handbag, PREPAID. If you don't find it the best value you ever saw, return it and get your money back. PAQUET SPECIAL Price, only.....47C

68¢

SPECIAL—42-inch Venetian

No. 995-M.—The PAQUET SPECIAL Venetian Cloth is famous from Coast to Coast for its quality and unequalled value. Tourists and Visitors, who throng Quebec, both in Summer and in Winter, invariably become enthusiastic over this. The width is 42 inches, and the color-range includes all the new Spring shades. Samples will be sent you FREE upon request. PAQUET SPECIAL Price, per yd.....68C

The P. E. I. Provncial Seed Fair Prize Winners.

WHEAT, WHITE FIFE, 1, Frank McEwen, Summerside; 2, Horace Wright, Lower Bedeque; 3, Chester Bowness, North Bedeque; 4, Geo. Wedlock, Mt. Royal; 5, M. D. McLeod, Mt. Royal; 6, A. E. McLean, Southwest, Lot 16; 7, Wood & Son, Hazelbrook; 8, Wm. B. Drake, Cornwall; 9, John Court, Donaldston; 10, John T. Dawson, North Tryon

WHEAT, WHITE CHAFF, 1, Horace Wright, North Bedeque; 2, Joseph McDonald, Vernon River Bridge; 3, Wood & Son, Hazelbrook; 4, C. N. Black, Bedeque; 5, W. C. Clark, Wilmot; 6, E. W. Martin, Southport; 7, Walter Green, Summerside.

WHEAT, WHITE RUSSIAN, 1, D. P. Ross, Lr. Montague; 2, Colin T. Wright, Middleton; 3, Horace Wright; 4, Geo. McFarlane, Bedeque; 5, John Crockett, Carleton; 6, A. E. McLean, Southwest, Lot 16; 7, Jas. E. Murphy, Augustine Cove; 8, Alfred Small, Summerside; 9, Herbert Arsenault, Urbanville; 10, W. J. McLean, Southwest, Lot 16.

WHEAT, ANY OTHER VARIETY, 1, W. B. Drake, Cornwall, Red Fife; 2, Elmer Compton, St. Elenors, Red Fife; 3, R. H. Ramsner, Cascumpec, Willmans Fife; 4, Herbert, S. Arsenault; Hessian; 5, D. J. McLeod, Stanley; 6 and 7, M. D. McLeod, Preston, Willmans Fife; 8, W. P. Callahan, Ebbsfleet, Perry; 9, Norman Perry, St. Louis, C. Bearded; 10, L. A. Arsenault, Hessian Bearded.

OATS, WHITE BANNER OR DANISH, 1, Horace Wright, Lower Bedeque; 2, W. C. Clarke, Wilmot; 3, Percy Marchbank, New Annan; 4, Thos. E. Waugh, North Bedeque; 5, W. G. Taylor, North Bedeque; 6, Jas. E. Murphy, Augustine Cove; 7, A. E. McLean, Southwest, Lot 16; 8, Herbert, S. Arsenault; 9, Michael McKenna, Newton; 10, John Hall, Traveller's Rest.

OATS, WHITE LIGOWO, 1, Herbert Mills, St. Elenors, 2, Ira L. Rodd, North Wiltshire; 3, D. J. McLeod, Mt. Royal; 4, Herbert S. Arsenault; 5, J. M. Laird, Kelvin; 6, Herbert Mills, St. Elenors; 7, James Simpson, Bay View; 8, A. E. McLean, Southwest; 9, M. D. McLeod, Mt. Royal.

OATS, WHITE SENSATION OR $1000, 1, John J. Hall; 2, Marchbank Bros., New Annan; 3, Elmer Compton; 4, Joseph A. Taylor, Freeton; 5, A. E. McLean; 6, W. J. McLean; 7, R. L. Schurman, Ross Corner; 8, John I. McKinnon; 9, Wm. Cairns, Summerside.

OATS, WHITE, ANY OTHER VARIETY, 1, D. P. Ross, Lower Montague, Golhland; 2, Herbert Mills, Jumbo; 3, John Court, Bedford, Wild Auk; 4, Herbert S. Arsenault, Bumper; 5, Thos Ramsay, Hamilton, Sweedish; 6, R. L. Schurman, Waverley; 7, M. D. McLeod, Wide Awake; 8, Benj. A. Mallett, Little York, Irish; 9, W. J.

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McLean, Southport, White Elephant; 10, F. Glydon, Tartar King.

OATS, BLACK, TARTARIAN OR NORWAY, 1, Ira L. Rodd, North Wiltshire; 2, James Simpson, Bay View; 3, Marchbank Bros; 4, Albert Weeks, Carleton.

OATS, BLACK BEAUTY OR OLD ISLAND, 1, Cornelius McLellan, Arlington; 2, Joseph F Arsenault, Urbanville; 3, Jas. E. McDonald, North Bedeque; 4, R. L. Schurman, Ross Corner; 5, Norman Perry, St. Louis; 6, James E.Murphy, Augustine Cove; 7, Elie E Arsenault, Urbanville; 8, R. H. Raynor, Caseumpec; 9, W James Cairns, Freeton; 10, Jos. Taylor, Freeton.

OATS, BLACK, ANY OTHER VARIETY NAMED, 1, W. G. Schurman; 2, R. L. Schurman; 3, Marshbank Bros; 4, M. D. McLeod; 5, De. W. T. Montgomery, Traveller's Rest, 6, A. D. McKinnon; 7, W. James Cairns.

BARLEY, TWO ROWED, 1, J. A. Taylor, Freeton; 2, Amos Rodd, North Wiltshire; 3, A. E. McLean; 4, Herbert L. Arsenault; 5, W. C. Clark; 6, Horace Wright; 7, A. J. Craswell, St. Elenors; 8 Albert Schurman; 9, W. G. Taylor; 10, R. S. Schurman.

BARLEY, 6 ROWED, 1, Horace Wright; 2, A. E. McLean; 3, Herbert L. Arsenault; 4, W. P. Callaghan.

BUCKWHEAT (SILVERHULL), 1, J. J. Trainor, Bedford; 2, Vermon Bryenton, Union Road; 3, Horace Wright; 4, Benj. A. Mallett; 5. Jas. E. Murphy; 6, M D McLeod; 7, John Court; 8, John J. McKinnon; 9, D. J. McLeod; 10, Wood & Son, Hazelbrook.

BUCKWHEAT, ANY OTHER VARIETY NAMED, 1, James A. Murphy; 2, John J. Johnson, Cent. Bedeque; 3, John T. Dawson, North Tryon; 4, Albert, Schurman.

PEAS, FIELD, 1, Hebert S. Arsenault; 2, Elie E. Arsenault.

BEANS, WHITE, 1, Thos. Stavart, Wilmot.

BEANS, COLORED, 1, Thos. Moyse, Central Bedeque; 2, John Dukeshar, Summerside; 3, Herbert S Arsenault; 4. Arsene Gallant, Muscouche; 5, B.Desroches Muscouche; 6, L. A. Arsenault; 7, John Dickieson, Summerside.

FLAX, 1, Amos Rodd; 2, Mrs. A. McLeod, Rose Hill; 3 W.A McLeau; 4, John T. Dawson; 5, Percy Marchbank; 6, Mason J. Simpson, Belmont; 7, Richard Creed, Albion.

TIMOTHY, 1, H.A. Darbey, Abram's Village; 2. Jas. E. Murphy, Augustine Cor.; 3, Chester Bowness; 4, Thos. Moyse; 5, De. W.T. Montgomery; 6 John J. McKinnon; 7, John Johnston; 8, Geo. Wedlock, Mt. Royal; 9, James Silliker, Searletown; 10, Loyd, Linkletter, Linkletter.

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CLOVER, MAMMOTH, 1, Jas Howlett, Gowan Brae; 2, T. B. Gillespie, Carleton; 3, L. A. Arsenault.

CLOVER. RED COMMON, 1, Horace Wright; 2, R, H Raynor, Cascumpec.

CLOVER, ALSYKE, 1, M. D. McLeod; 2, Geo. Wedlock; 3, Jas. E. Murphy.

POTATOES, MCINTYRE, 1, Jas. E. Murphy, Augustine Cove; 2, Thos. Schurman, New Annan; 3, Frank McEwen, Summerside; 4, Dr. W. T. Montgomery, Traveller's Rest; 5, Thos. S. Waugh, North Bedque; 6, Ira L. Rodd, North Wiltshire; 7, Chas. Craig, Middleton; 8, Hubert S. Arsenault. Urbanville; 9, Joseph A. Taylor, Freetown; 10, W. J. McLean, Southwest Lot 16,

POTATOES WHITE LONG, 1, J. E. Sinclair, Emerald; 2, De. W. T. Montgomery; 3, Melville Murray, St. Elenous; 4, Herbert S. Arsenault, Urbanville; 5, W. C. Clark, Wilmot; 6, Michael McKenna, Newton; 7, Richard Clark, Summerside; 8, B Jardine, Wilmot; 9. L, A. Arsenault; 10, John T Dawson, North Tryon.

POTATOES, DAKOTA RED, 1, Horace Wright, Lower Bedque; 2, John A. McLeod, Darlington; 3, J. E. Sinclair, Emerald, 4, Thos. T. Waugh, New Bedque; 5, Hubert S. Arsenault, Urbanville; 6, Michael McKenna, Newton; 7, D. J. McLeod, Mt Royal; 8, Wood & Son, Hazelbrook; 9, B. Disroches, Muscouche; 10, John T. Dawson North Tryon.

POTATOES, ROSE TYPE, 1, Dugald Stewart, Kensington; 2, Harry Schurman, New Annan; 3, Dr. W. T. Montgomery, Traveller's Rest; 4, John T. Dawson, North Tryon, 5, R. L. Schurman, Ross Corner; 6, Richard Clark, Summerside; 7, Cornelius McLillan, Arlington; 8, Peter Brodie, York; 9, Michael McKenna, Newton; 10, Hubert S. Arsenault, Urbanville.

POTATOES, GREEN MOUNTAIN, 1, John G. Dawson, North Tryon; 2, Dugald Stewart, Kensington; 3, John Johnson, East Bedeque; 4 Chas. Craig, Middleton; 5, Elie E Arsenault, Urbanville; 6, D. J. McLeod, Mt. Royal; 7, M. D. McLeod, Mt. Royal; 8, Frank Hall, Traveller's Rest; 9, Hubert S. Arsenault, Urbanvilln, 10, Jas. Stewart, Kensington.

POTATOES, WHITE ROUND, 1; Richard Clark, Summerside; 2, W. C Clark, Wilmot; 3, L. A. Arsenault, Urbanville; 4, John T. Dawson, North Tryon, 5, Peter Brodie, Little York.

POTATOES, ANY OTHER VARIETY, 1, Frank McEwen, Summerside, 2, Dr W. T. Montgomery, Travellers Rest; 3, W. C. Clark, Wilmot; 4 Thomas Stavart; 5, Chester Bowness, North Bedeque; 6, Norman Campbell, Cape Traverse; 7, Norman Perry, St Louis; 8, John T. Dawson, North Tryon; 9, Peter Brodie, Little York; 10, John J. McKinnon, New Annan.

ESCHALLOTS, 1, Geo, W. Schurman, New Annan; 2 Sydney Richardson, St. Elenors; 3, Harry Waugh, Wilmot; 4, Walter Simpson, Bay View; 5, Albert Weeks, Carleton; 6, John J. Hall, Travellers Rest; 7, L. A. Arsenault, Urbanville.

TURNIP SEED, SWEDE, 1, De. W. T. Montgomery, Travellers Rest; 2, Alfred Small, Summerside; 3, John Johnson, East Bedeque; 4, Frank Hall, Travellers Rest; 5, Thos. Schurman, New Annan; 6, jas. A. Taylor, Freeton; 7 L. G. Gallant, St. Timothy; 8, Horace Wright, Lower Bedeque; 9, Harry Fowler, East Bedeque.

MANGEL SEED, 1 L. G. Gallant, St. Timothy; 2, Harry Fowler, East Bedeque.

CABBAGE SEED, 1, Horace Wright, Lower Bedeque: 2 Thos. Schurman, New Annan, 3, Thos. Stafford, Wilmot.

OTHER GARDEN OR VEGETABLE SEEDS, NOT ELSEWHERE SPECIFIED, 1, L. A. Arsenault, Urbanville, 2, Mrs. Wm. Adams, Muscouche, 3, Mrs. A. McLeod, Hose Hill; 4, 5, and 6, Thos. Moryse Center Bedeque; 7, Harry L Fowler, Center Bedeque; 8 and 9, Thos. Moryse.

COLLECTION ISLAND WEED SEEDS INJURIOUS TO CROPS, 1, Preston Warren, North River, 2 Geo. Annear, Lr. Montague; 3, Blanch McLean, Southwest Lot 16; 4, Mabel Murray, St. Elenors; 5, Verner Murray, St. Elenors, 6, Harry Fowler, Center Bedeque.

COLLECTION OF ISLAND WEEDS, PRESSED AND MOUNTED, 1, Harry L. Fowler, Center Bedeque; 2, Raymond Brown, Charlottetown; 3, Dan. E. McLean, Searletown; 4, Preston Warren, North River; 5, Geo. Annear, Lr. Moritague; 6, Blanche McLean, Southwest.

SPECIAL PRIZES.—CLASS C.

Silver Cup. Donated by Hon. John Richards, Best samples 2 bush Oats—W. Banner or Ligowo Best samples 2 bush. Wheat—White Fife or White Russian. Best samples 2 bush. Barley—6-rowed To be grown by exhibitor and open to members of Farmers' Institutes only. Cup to be won three times (not necessarily consecutively) before becoming the property of the exhibitor, Won in 1909 by A. E. McLean, Lot 16, A. E. McLean.

Silver Cup, Donated by Hon. John Richards, Best samples 2 bushels Oats from fields that competed in the fields of standing grain competition 1909. Cup to be won three times (not necessarily consecutively) before becoming the property of the exhibitor, Thos. T Waugh, North Bedeque.

$5.00 in Gold, Donated by Carter & Co., Charlottetown. Best samples 2 bushels Wheat from fields that competed in the fields of standing grain competition 1909, Jas. E. Murphy, Augustine Cove.

Donated by Steam Navigation Co., Charlottetown, For the largest and most creditable number of exhibits in Wheat, Oats, Barley and Buckwheat: 1st prize, $5.00; 2nd prize, $3.00; 3rd prize, $2.00, 1, Jos. Taylor; 2, J. A. McLean; 3, Horace Wright.

Silver Cup. Donated by Charlottetown Business College, For the largest and most creditable number of exhibits in the Household Science Department, Mrs. L. U. Fowler Bedeque,

Silver Cup, Donated by H. J. Cundall, Esq., Charlottetown. For the best Loaf Home-made White Bread. Cup to be won three times (not necessarily consecutively) before becoming the property of the exhibitor, Mrs, John Rogers, Summerside.

Oue Barrel Holman's Leader Flour. Donated by R, T. Holman Limited. For the largest and most creditable number of exhibits in sections 1 to 8 inclusive, Household Science Department, Mrs. J. Gaudet Summerside,

Brass Kettle, Donated by Brace, McKay & Co., Ltd. For the largest and most creditable number of exhibits in sections 18, 19 and 20, Household Science Department, Mrs. L. U. Fowler, Bedeque.

An interesting story, relating the facts that a farmer found out about a Trade Mark.

This is a plain, truthful story about a farmer who lost dollars—hundreds of them—by saving cents.

He knew how to farm—how to get every quarter out of his cattle and the soil.

But—there was *one* thing this farmer *did not know.*

He did not know as much about *Bird Neponset Products* as he should. He did not know that the Trade Mark you see in this announcement was a guarantee of lasting quality—*a guarantee just as good as gold.* So he roofed his barn with a roofing *very similar in appearance* to Paroid Roofing. It cost just as much to apply that roofing as it would have cost to apply Paroid, and, when applied, it *looked* good. It even looked fairly good at the end of *the first* season's wear. But during the second winter Jack Frost *bit* into it, April Showers *soaked* it. The hot summer sun *blistered it.* Fall's driving rains *swept through it.* A two years' test reduced this handsome roofing into *a mushy, leaky business that called for a new roof.*

Then this farmer investigated the roofing question. He *discovered* that *Bird Neponset Products had* stood *the test of time*—that Paroid Roofing is no uncertainty. He found out that the "*Little Girl*" and the name "Neponset" was *the century-old* firm's guarantee of *Quality* and *Durability.* It's easy to figure out how he lost *considerable* money on his barn alone. He also lost money on his poultry shed. And he was mighty lucky that he *didn't lose more* on both. But, he was *a philosopher* as well as a farmer. He ripped off the "Just as good" roofing and covered his buildings with Paroid. Let him finish the story: "A man who pays attention to his business on the farm *can make money.* But when it comes to erecting or repairing buildings it's the easiest thing in the world to waste hundreds of dollars. *The important thing* about farm buildings *IS the right roofing.* The *wrong* roofing is never worth its first cost—never worth laying. Because I was fooled once I *investigated* the roofing question, now I know. Take my advice, when building or repairing, look for the "Little Girl" Trade Mark—before buying roofing. That Trade Mark is on every roll of

MADE IN CANADA

PAROID ROOFING

—an absolute guarantee of value based on the time test—the only test there is—for a roofing. F. W. Bird & Son are the originators of the complete Roofing Kit—there's cement, nails, rust-proof caps and complete directions for laying in each roll of Paroid.

OUR OFFER: **When you see Paroid on your roof—if it is not satisfactory tell us and we will send you a check for the cost of the roofing and the cost of applying it. If any BIRD NEPONSET PRODUCT ever proves defective in manufacture we will replace it. If a broader guarantee than this could be made we would make it.**

N. B. **Write to our Building Counsel Department for free information concerning any building problem you may have to solve. Give full particulars, and state exact dimensions.**

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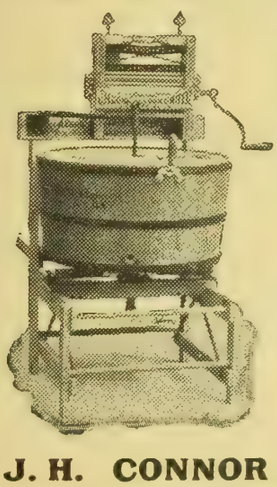

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Write to-day for booklet. We can supply you to any station in Canada.

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Would Often Lie in Bed For Days, Scarcely Able To Turn Herself.

Mrs. Arch. Schnare, Black Point, N.B., writes:—"For years I was troubled with weak back. Oftentimes I have lain in bed for days, being scarcely able to turn myself, and I have also been a great sufferer while trying to perform my household duties. I had doctors attending me without avail and tried liniments and plasters, but nothing seemed to do me any good. I was about to give up in despair when my husband induced me to try Doan's Kidney Pills, and after using two boxes I am now well and able to do my work. I am positive Doan's Kidney Pills are all that you claim for them, and I would advise all kidney sufferers to give them a fair trial."

DOAN'S KIDNEY PILLS are a purely vegetable medicine, realizing quick, permanent relief, without any after ill effects. A medicine that will absolutely cure Backache and all forms of Kidney and Bladder Disease.

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Receive this beautiful new style, tailored suit. The skirt is made in the new pleated style. The coat is made with a semi-fitted back, lined in excellent quality mercerized sateen, tailor padded and stitched, with new roll collar, and made generally, just as pictured. The cloth is all wool French Panama in cream, navy, black, brown, green, grey and red. For $7.95 we can supply this suit in all wool Venetian in black, navy, brown, green, grey and red. The regular price of these suits is from $12 to $15. We are overstocked in cloth and have cut them to sell them quickly. Give number of inches around largest part of bust and hips, around smaller part of waist, also length of skirt in front. Send your order today. Order Suit No. 50.

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a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle delivered. Book 8 D free. ABSORBINE, JR., for mankind, $1. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Book free.

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for our present standing is our carefulness respecting statement of facts. After about forty years of public service, we cannot be accused of a misleading statement or an unfulfilled promise. We are grateful for the evidence afforded us by our patronage that we stand higher in public appreciation than at any previous time.

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S. KERR, Principal.

SHEEP-RAISING AS A BUSINESS

The mild Winter in Nova Scotia has been very favorable to the growth of the fine soft wool for which the Province is famous. The Manager of the Hewson Woolen Mills is particularly happy over this condition of affairs, as his factory uses so much of this choice wool in Hewson Tweeds and Underwear. There are great opportunities for profitable sheep-raising in Nova Scotia.

Farm Problems.

Soft Wood Ashes.

SUBSCRIBER, KENT. Co., N. B.

1. What are soft wood ashes worth per barrel as a fertilizer?
2. Are they better and cheaper then lime at $1 20 per barrel?
3. What are ashes worth that are made at the end of a chute where all the refuse from a saw-mill is gathered and burned, but exposed to all rains and constant burning for three or four months?
4. Are they as valuable as ashes that are not exposed?
5. If not, what are they worth per barrel?
6. How many barrels of ashes are required per acre for the various root and grain crop?
7. How are they the best applied to be evenly distributed in the absence of a manure spreader?
8. Is the spring or fall the better time to apply them?
9. Are ashes to be left near the surface or well worked in with a disc harrow?
10. When would be best to sow on sod plowed last fall and disc harrowed when ashes are spread next spring. The land is a clay bottom but not wet, being well surface drained.

1. There is an impression that soft wood ashes are distinctly inferior to those of hard wood in potash content, but analysis made in the Farm Laboratories have not borne out this conclusion. Soft wood ashes are certainly lighter than those from hard wood and, consequently, bulk for bulk the former are not so valuable, but purchased by weight which is the only rational method there may be but little difference between them in fertilizing value.

Wood ashes of all kinds are quite variable as to composition, due to a number of causes, such as the presence of sand, of excessive moisture—and it is for this reason that we always counsel having an analysis made of a thoroughly representative sample before buying.

It must not be inferred from what has been said that the ashes from all woods are similar in composition. Such is not the case. What we wish to emphasize is that the contention that soft wood ashes are necessarily poor, is incorrect.

2. Without the knowledge of the weight of a barrel of the ashes and of their percentage of potash, it is impossible to say what the value may be, but supposing them to be unleached, tolerably free from sand or other inert matter and fairly dry, they should be considerably more valuable than a similar weight of lime.

3. This question can only be satisfactorily answered by an analysis. If the leaching has been at all severe and long continued and the ashes are now wet, they may not contain 1 per cent. of potash. In such a case they would not be worth more than the expense entailed in a short haul.

4. The application may be from 40 to 80 bushels per acre, according to the present condition of the soil, the nature of the crop to be grown, etc.

5. If fairly dry, the ashes may be distributed from the wagon box by a shovel, chosing a windless day for the work.

6. Ashes may be applied at any time, but on the whole spring is to be preferred, as this entails less risk of "washing" from the surface of the land Their potash is immediately available and consequently can be utilized by the crops of the season in which they are applied.

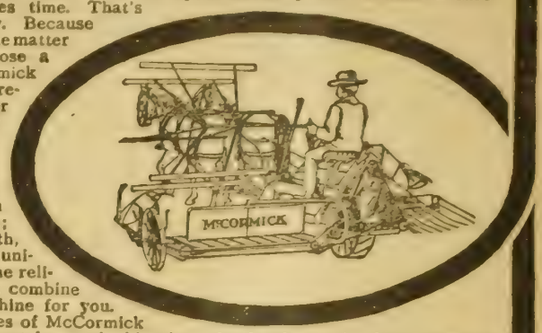
7. We advocate spreading them on the well prepared land in the spring previous to seeding and incorporating them with the surface soil with a smoothing harrow. There is no advantage in burying the ashes, but rather the reverse.

8. We think that corn, potatoes or other vegetable crops would derive more benefit, that is, give a better response, than the cereals. Leafy crops, in general, are particularly benefitted by potash, the chief fertilizing element supplied by wood ashes.—FRANK T. SHUTEX.

START TODAY TO GET READY FOR HARVEST TIME

DON'T put it off any longer. From now on 'till harvest you are going to be busier every day. Your grain is likely to ripen all at once. Then you'll want to cut it quickly. You can't do it unless you are prepared with the best harvesting machines—in proper condition.

To be sure of getting the best machine for your needs—you must make a careful selection. That takes time. That's why we say start today. Because we know if you go into the matter carefully you will choose a McCormick. The McCormick Binder will meet your requirements as no other machine will. It is built to meet the conditions encountered on the Canadian farm. It has stood the test of years. Its capacity to handle grain that is tangled or down; its simplicity, strength, durability, light draft, uniform, good work and the reliable work of its knotter, combine to make it the best machine for you.



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Every McCormick everywhere is recognized by farmers as a leader in its class. But we don't ask you to take our word for this. We say—Start today to investigate so you will have time to make a proper decision.

For catalogue and specific information on any McCormick machine, call on the local dealer or write direct to nearest branch house.

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JOHN A. BRUCE & CO., LIMITED,

HAMILTON, - - - ONTARIO

Displaced Patella.

SUBSCRIBER, ANTIGONISH CO., N. S.

Three year old mare when taken out of stable, streches out leg and brings it forward with a jerk for a few steps. Will be all right for two weeks or so, when it will be noticed again. What is the cause and cure?

The pathological condition is a displacement of the Patella, the small bone of the stifle joint caused sometimes by slipping in rising or by weakness in convalescing patients or lack of tenecity of structures and general debility at times from relaxation of tissue from want of exercise. Usually young animals with straight hocks and sloping croups are predisposed to this disease.

Treatment in some cases is very simple, a sudden jerk may be all that is required to draw the patella into place.

But this is not always sufficient, when not, attach a rope or strap to the fetlock, have an assistant draw the foot well forward, grasp the patella and push it upward, forward and inward and slip it in over the outside border of the trochlea of the former, when the bone slips into position the trouble is relieved and the animal may walk or trot without lameness. After treatment, cold bathing, keeping animal in large box stall loose, when not out. Exercising occassionally cures. Blistering, the part is frequently beneficial. For a blister, take one dram of mercury biniodide, two drains of pulverized cantharadies and one ounce of basatine, mix well, clip the hair off over the joint and rub the blister well, in 24 hours after grease, and after another 24 hours wash off and grease again then keep quiet in a box stall. Tie the head so as to keep the nose from the blistered part for 48 hours after applying and a week after give exercise daily. J. STANDISH, V. S.

MARKETS.

St. John Markets.

GRAIN—Oats, 52 to 53c; corn meal, $1.50 per bag.

GRASS SEED.—Timothy, $5.75 to $6.75; common red clover, 17 1-2c to 19c; mammoth red clover, 17 1-2c to 19c, alsike, 14 1-2c to 55c

LIVE STOCK—Milch cows, $30 to $60.

DRESSED MEATS.—Beef (carcass), 6c to 10c; beef, (retail) 10c to 22c; mutton, 5c to 6c; veal, 7c to 10c; lamb, $4 00 to $5 00; pork, 11c to 11 1-2c.

HORSES—Drafters, $200 to $300; roadsters, $150 to $250

DAIRY PRODUCTS—Creamery butter, 25c to 27c; dairy butter, 20c to 25c; cheese, 13c.

POULTRY AND POULTRY PRODUCTS,—Eggs, 22c to 25c; fowl, 80c to $1 60; turkeys, 20c to 25c.

FRUIT,—Apples, $1.50 to $5.00; honey, $1.10 per gal.; maple products, candy, 20c; sugar, 15c.

MISCELLANEOUS,—Beef hides, 10c; calfskins, 16c; sheep skins, 75c to $1.00

VEGETABLES—Carrots, $1.20 to $1.40; turnips, 65c to 80c; beets, $1.50

Charlottetown Market

GRAIN,—Oats, 42c white, 44c black.

DRSSED MEATS,—Beef (carcass) 6c to 8c; mutton, dressed, 7c to 9c; veal, 4½ to 6c; pork, 10¾ to 11¼c.

DAIRY PRODUCTS—Creamery butter, 25c; dairy butter, 20c; cheese, 12½ to 13c,

POULTRY AND POULTRY PRODUCTS.—Eggs, 22½c; fowl, 12c; chickens, 12c to 13c.

VEGETABLES.—Potatoes, 30c to 40c; turnips, 12c to 14c.

MISCELLANEOUS—Hay, pressed, $10.50; straw, $5.50 to $6.50; beef hides, 8c; calfskins, 12c; sheep skins, 80c to 90c.

There is not much change in prices or conditions since our last report. The principal change being in pork which is still advancing. Eggs are coming in fairly well and the prices will likely be lower. What we call Easter beef is selling at 5½c to 6c live weight. Oats are coming out slowly owing to the state of the roads There is not any large lots in dealers hands and some say not as many as we may think for sale in the farmers hands. Butter market is quiet and dull.

Halifax Prices.

GRAIN—Oats, 52c to 53c per bushel; buckwheat, 3½c to 4c per 100.

FEEDSTUFFS,—Bran, $25 50 per ton; shorts, $27.00 per ton; middlings, $28.00 per ton; oil cake, $2.20 per bag; cottonseed meal, $2.50 per bag; gluten meal, $1 50 per bag.

GRASS SEEDS.—Timothy, 6c,

DRESSED MEATS,—Beef (carcass), 8½c steers, 10c; beef (retail), 12c to 18c; mutton, 6½c to 7½c; veal, 6c to 7c; lamb, 11c cold storage; pork, 11c to 12c.

DAIRY PRODUCTS,—Creamery butter, 28c to 27c; dairy butter, tubs, 20c to 22c; prints, 22c to 23c; cheese, large, 13c to 13½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c to 23c; fowl, 13c; chickens, 15c; ducks, 16c; turkeys, 17c to 18c,

FRUIT—Apples, $1 50 to $3.00; cranberries $9.00.

VEGETABLES,—Carrots, $1.75; potatoes, $1.25 to $1.35; turnips, 90c; beets, $1.75.

MISCELLANEOUS,—Hay, $14 00 to $15.00; straw, $9.00 to $10 00; wool, washed 21c, unwashed, 14c; beef hides, 8½c to 9c; calf skins, 14c to 15c; sheep skins, 5½c to 6c.

Pork higher, with prospects of still higher prices. Potatoes, owing to the West India market being so low a number of cars which were intended for export were offered for sale here at a low figure consequently causing a drop in price and sound lots have been sold the past week as low as $1.15 per three bushel bag, other vegetables remain firm at quotations.

Butter, the supply of creamery is short and prices are firm at quotations, dairy, 2 lb. prints are coming in very plentifully and stocks are accumulating, prices have shown a decline. good dairy in tubs is very scarce.

Eggs, prices are considerably lower due to continued mild weather and large recipts and still lower prices are looked for the first of next week.

Cheese, market is firm, stocks in hands of dealers are light for this time of year and an advance is looked for.

Glenwood Ranges are Made in St. John
No Better Ranges Made in Canada.

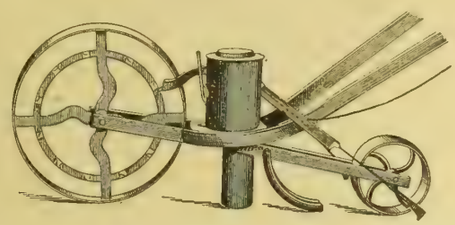
In our Glenwood Ranges we have a line that is equal to any stoves that are on the market. Our ranges have met the requirements of the people. We put material and workmanship in our Glenwood Ranges. We make Cabinet Glenwood, Glenwood E., Modern Glenwood, Glenwood Cook, besides Glenwood Oaks and Furnaces. Our ranges are built to wear and have stood the test. They have removable nickel that fastens with a patent spring removable grate, direct draft, short handle damper, long centres cut in two to prevent warping. These are a few of the qualities of our ranges. Space prevents us giving more. Watch our ad in each issue of the MARITIME FARMER and learn all about our ranges. Write for catalogue and prices.

McLean, Holt & Co.

155 Union Street, ST. JOHN, N. B.

Garden Seeder.

Now is the time to send in your orders for Garden Seeders—we can supply you with the **Simplest, Most Durable** and by far the **cheapest** Garden Seeder on the Canadian market—Enclose P. O. for $7.50 with order and we will ship you one at once.



Will sow—Turnip, Cabbage, Sage, Carrot, Onion, Parsnip, Spinach. Beet, Pea, Corn, etc. **Write at Once.**

Sussex Manufacturing Co., Ltd.

SUSSEX, - - N. B.

As handsome as the best iron fence at less than the cost of cheap wood

Here's a neat, strong, durable fence that will add to the appearance of the handsomest city lawn and is cheap enough, close enough and strong enough for the farm. The

Peerless Lawn Fence

is made of heavy No. 9 steel spring wire, so it can never sag. It is carefully galvanized and coated with white enamel paint. No investment you can make will add so much to the appearance of your property.

Also a full line of poultry and farm fences and gates. Write for particulars.

THE BANWELL HOXIE WIRE FENCE CO., LTD., BOX K HAMILTON, ONT., WINNIPEG, MAN.

STOCK NOTES.

WALTER E EATON, writes:—I have lately sold to Glassburn Society, Antigonish, a nice roan bull and to East Dalhousie Society, Kings Co, a dainty red bull. The enquiries for bulls are quite numerous and I have the goods that are wanted.

EGGS FOR HATCHING.—The Glen View Poultry Yards after a very successful season at the fall and winter fairs and after culling out their pens everything but the very best are now offering run of pens eggs for hatching from their different varieties, at $2.00 per 15. They have several choice matings for which they are asking special prices. Poer hatchers will be duplicated free of charge. For full particulars re prices and matings send for catalogue to WALTER MCMONAGLE & SONS, Sussex, N. B.

SILVER CUP FOR WESTMORLAND POULTRY SHOW.—At a largely attended meeting of the Westmorland Poultry and Pet Stock Association held on the 8th inst. the Associatson was advised that Mr. J. W. Y. Smith would offer a silver cup for competition at the next show. The Association would like to see others follow. Some important changes were made in the prize list at the meeting and in order to arouse more interest among the farmer's utility classes will be formed at the next show. In classes where there are between 10 and 15 entries four cash prizes will be given as follows: 1st, $2.00, 2nd $1,50, 3rd $1.25, 4th $1 00. Where there are over 15 entries 6 prizes will be given adding a 5th of 75c and 50c. This will make the prizes offered by the local Association larger than any other Association in the Maritime Provinces. It was also decided to hold the next show in january, 1911, and arrangements will likely be made with the different Asscciations to hold the next shows in circuit which will reduce expenses of judging as an effort will be made to have the same judge attend all the shows. A large number have joined the Asscciation since the commencement of the present year and all interested in the poultry show will help the Association along by becoming members. The members intend making every effort to make the 1911 show bigger and better than any show ever held in the maritime provinces and will have this show open to the three provinces.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins sheep and lamb pelts, J. J. MCLEAN & SONS, Hopewell, N. S.

SHORTHORN BULLS for sale. WALTER EATON, Upper Canard, Kings, N. S.

WANTED.—Shorthorn bull not under 15 months.—JAMES A. THOMSON, Durham, N. S.

FOR SALE.—Shorthorn bulls from 5 to 17 months,—ISAAC CHIPMAN & SON, Chipman Corner, N. S.

GUERNSEYS FOR SALE.—New milch cow 4 years old; bull calf, 2 months old.—I. C KELLEY, Berwick, N. S.

FOR SALE.—Registered Chester White Pigs, $5.00 at six weeks old; 800 pound sire,—WALTER S. COGSWELL, Centreville, N. B.

YORKSHIRES, registered; $5.00 at five weeks; best breeding; satisfaction guaranteed.—R. J. MESSENGER, Bridgetown, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

HOLSTEIN bull calves for sale, Canadian register. Prices right. For particulars write F W. C. NASE, Nerepis Station, Kings County, N. B.

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FOR SALE—A choice orchard, stock and tillage farm; 112 acres; soft water in house and out; 600 to 800 barrels apples; large and good buildings; splendidly located at a bargain,—J. W. REID Wellsford, via Berwick, N. S.

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WANTED,—A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W. A. JENKINS' MFG. CO., London, Ont.

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Ayrshire bull fit for service. Four Ayrshire bull calves, Ayrshire females any age. Thirty-five head to choose from. Intending purchasers met at railway depot. Book orders for Chester White swine. Long distance phone in residence. J. FRANK ROACH, Sussex, N. B

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BARRED PLYMOUTH ROCKS
WHITE ORPINGTONS

We have the finest strains in North America. Stock and Eggs in season.

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Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching from me. My Reds are imported from the United States and were winners at Sussex, Halifax, Fredericton and Amherst Winter Fair in 1909. Prices on application.

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You can get an Incubator and Brooder from us and we will give you time on it. We have three prices, 50c, $1.00 and $2.00 Eggs. We will be happy to tell more about it.

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Bees, Hives, Sections and Foundations at lowest prices, also Small Fruit Plants.

Price lists free.

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For Sale or Trade for a Heavy Stallion

the great race stallion Jefferson Wilkes; he has a mark of 2.14 and has been miles in 2.7 and can trot faster today than any stallion now owned in the Maritime Provinces; is standard bred and registered; foaled in 1894; is sound and kind; a lady can drive him; and is very handsome. He has raced down the grand circuit three times and as a stock horse he has no superior; he is the sire of the following fast ones, Jefferson Wilkes Jr 2.14¼, Maria Jeffsrson 2.20¼, Croesus 2.19½, Miss Jefferson 2.24¼, McKinney 2 11, and many other fast ones. WARREN C. BULL, Grafton, Car. Co., N. B.

267 Eggs in 365 Days

is the wonderful and unbroken record made by the Barred Plymouth Rock Hen,

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who was the foundation of the greatest Egg-producing and Prize-winning strain of Plymouth Rocks in the world to-day. Weight of females, 7 to 10 pounds; males from 8 to 11 pounds. Eggs for hatching for sale every month in the year and a few choice breeding birds on hand now, as we are practically done hatching this season.

For prices and photos apply to the Originator and Breeder of this wonderful strain of fowl. Satisfaction guaranteed.

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Houdans,
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Our yards contain birds of show quality and high individual merit.

Book your orders early.

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One pure bred bull 8 months old. one pure bred heifer 8 months old, one pure bred heifer 2½ years oldt one pure bred cow 4 years old. The first two are sired by Emma's Fashion. The last two are in calf by Emma's Fashion Apply to

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Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.

Correspondence solicited.

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are what you are after. You can make them with a GOOD Incubator and Brooder. You can loose them with a poor outfit. Does your boy want to start in business? Let him write to me. Credit if you want it. J. B. DAGGETT,
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An importer and dealer of many years experience is prepared to fill orders for all classes of stock, subject to inspection on arrival by officials of the Provincial Departments of Agriculture, delivery upon conclusion of inspection and quarintine. No inflated prices but turn over made as low as quality of stock will permit. Horses, Cattle, Sheep or Swine bought as orders may be received. Reference from prominent stockmen and officers of the British War Office may be seen at the Department of Agriculture, Fredericton. Correspondence solicited. Address

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We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp. by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

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Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

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EXTREMELY LOW PRICES

—ON SEVERAL—

PURE BRED AYRSHIRES

—INCLUDING—

Some Aged Cows

2 Year Old Heifers, coming 3 in August, (in calf, due Aug. and Sept.)
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Send for descriptive list.

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W. J. M. McLeod, Loch Lomond, West N. S., Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

Gold River Farm.

CHESTER WHITES!

We are booking orders for Purebred, Registered Chester White Pigs, 6 weeks old, for spring delivery.

Do you want one? If so, book your orderearly and we will give you satisfaction,

W. C. MacLEOD & SONS,
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Ayrshire Cattle and Oxford Down Sheep, Young Rams, also a few breeding ewes of different ages can be spared.

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Eggs! Eggs! Eggs!

For Hatching.

From stock that won the big silver cup for "best exhibit at the Maritime Winter Fair" at Amherst. No better in Eastern Canada. Drop a line and get our mating list. Half price what you pay for Ontario and American eggs of the same quality. B. P. Rock, White and Brown Leghorn cockerels for sale.

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25 FOR $7.50 Baby Chicks and Lullaby Brooder

We save you the hatching.
Choice of 6 Breeds.

We have a full stock of Poultry foods.
Purina Baby Chick Food,
Fresh Ground Alfalfa Meal,
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Delivery Guaranteed. Incubators and Brooders and all supplies.

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I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

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Our claim to be the foremost breeders of this variety in Eastern Canada has been established by ten years of the keenest competition in the show ring with this class of birds. Our latest triumph at the Amherst Fair, winning, for the second time, the silver trophy for the best cock, hen, cockerel and pullet, of any variety, and the specials for the best shaped and the best colored bird of this kind, seals the fact. First cockerel, first pullet, first hen and second cock at Amherst means quality now. First cockerel, first hen, first pen and second cock at Halifax, all in one year, endorses it. Stock and eggs for sale. Satisfied patrons our aim.

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We have in stock at present and for sale a few Ayrshire and Guernsey Fresh Milk Cows, young—also some Heifers of both breeds, from one mouth to two years old. We have likewise decided to dispose of our flock of Shropshire Ewes, Rams and Lambs. All the above are first class stock and registered in the highest registration in their respective classes. Prices right. Call on us or write. Would be pleased to meet prospective buyers, either at Bloomfield Farm or at the coming local exhibition—Colchester and East Hants—or the Provincial Exhibition.

John McDonald & Son,
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I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

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Rose Comb R. I. Red Cockerels and Pullets. Columbian Wyandotte Cockerels and Pullets. Can furnish trios of both breeds, not related. Write for prices.

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This herd won 1st, 2nd, 3rd in the aged cow class at the Maritime Winter Fair Dairy Test Amherst, 1909, 2nd, 3rd, 4th in the three-year-olds, also 2nd, 3rd, 4th, in 2-year-olds. We have some bull calves to offer, also females all ages.

McIntyre Bros., Sussex, N. B.

FOR SALE.

Three Pullets, 1 Cockerel, 1 Cock, 1 Hen, S. S. Hamburgs; $5.00 takes the lot. Good stock.
Hatching Eggs, White Rock, S. C. R. I. Reds, $2.00 per 15.
Mating list ready now. A card brings one.
Model (Cyphers), Incubators and Brooders at cut prices

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Take notice that for the purpose of facilitating the sale of Cattle by correspondence, where buyer and seller are widely separated, the buyer may make application to the secretary of the association for the inspection of the animals selected by him, the application to be accompanied by a fee of $5.00 for the first animal and $1.00 for each additional animal to be inspected in the same herd, and by the letters received from the seller, and on receipt of such application the secretary shall send an official to inspect the animal or animals, before shipment, to ascertain if they have been fairly described.

G. W. Clemons, St. George, Ont.
ecretary Holstein-Friesian Association.

HEAVY TEAM HARNESS AT ROCK BOTTOM PRICES.

Gentlemen, it will soon be time to look to your Harnesses or parts of Harness or you will want a new Collar that will fit your horse and not sore his shoulders. Why not drop me a card and I will be only too glad to quote you prices? We also carry a full line of all kinds of Harness and Horse Goods that are up to date.

Wanted—Two or three tons of good Rye Straw in small or large lots.

EDGAR AYER, Wholesale Manufacturer, SACKVILLE, N. B.

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AYRSHIRE CATTLE AND YORKSHIRE SWINE.

ADDRESS:

S. J. GOODLIFFE, - Sussex, N. B.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Meadow Brook STOCK FARM

CHATHAM, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires

Importers and Breeders of Pure Bred Clydesdales, Hackneys and Shorthorns.

We invite your inspection of Stock

John Bennet, Supt. J. B. SNOWBALL & CO., Ltd., Props.

bonus be made available for a period of five years.

* * *

Resolved that whereas the educational authorities are making an effort to introduce agricultural education into our public schools.

And whereas it is advisable that our farmers in general assembly convened, should suggest to our educational authorities our immediate wants in that direction.

* * *

Therefore resolved that in the opinion of this Association, our educational authorities represented by the U. N. B. and the Normal school with the assistance of the Department of Agriculture secure the services of experts to give practical instruction in our Grammar and other schools in milk testing, budding and grafting and such other instructions as may be feasably demonstrated and that the necessary apparatus be supplied for demonstrating such institutions.

Further resolved that the teachers of country schools be required to qualify as soon as possible so they may possess sufficient practical knowledge to conduct school gardens.

* * *

Whereas in recent years epidemic diseases have not unfrequently occured in different communities in the province the cause of which has already been attributed to the use of impure or contamented water or milk supplies, and it is admitted that the regular periodical analysis by competent independent authority, of water, milk and other food supplies would at once detect impurities, prevent further use of some and afford a greater degree of protection to the health of our people generally.

And whereas there is now a demand by the Agricultural interests of this province for some promise in which shall give an opportunity for independent analysis of fertilizers and other articles in general by the farmers of this province in order to properly guard against adulteration and the use of inferior and detrimental articles

and whereas:—There is no established independent bacterio logical or chemical laboratory in this province available for the use of the public.

* * *

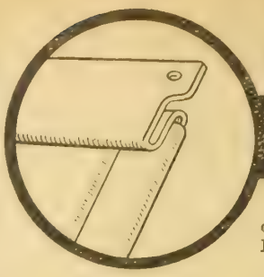
Therefore resolved.—That this Association urge upon the Government of this province the necessity for immediate establishment in connection with the University of New Brunswick a properly equipped chemical and bacteriological labratory, which shall be available for advice and assistance to the people of this province and any community and interest therein upon such reasonable terms and conditions as shall seem just and fair, and further resolved, that special committee be appointed by this Association to present the foregoing resolution to the Lieutenant Governer-in-Council and urge that the same be carried into effect as soon as possible.

Whereas the speech from the throne, at the opening of the Legislature, pledges the Government to introduce legislation to provide for the early construction of the St. John Valley railway by providing a Government guarantee of bonds.

* * *

Therefore resolved :—That this Association desires to express their gratification and approval of such legislation

Preston Steel Shingles are safe-locked on all four sides



TOP LOCK

You can only get the safe-lock construction in PRESTON Safe-Lock Shingles.

Look at picture of our side lock. See how the sides of the shingles hook over each other. This is on the principle of the sailor's grip. It is utterly impossible for shingles locked in this way to pull apart. The heavier the strain the firmer the grip.

The top of a shingle is where the greatest strain falls. Now look at our top lock. It is twice as strong as our wonderfully secure side lock. Notice that it consists of three thicknesses of sheet steel. The top of our shingle is unaffected by strains due to settling of building or shrinking of sheeting.

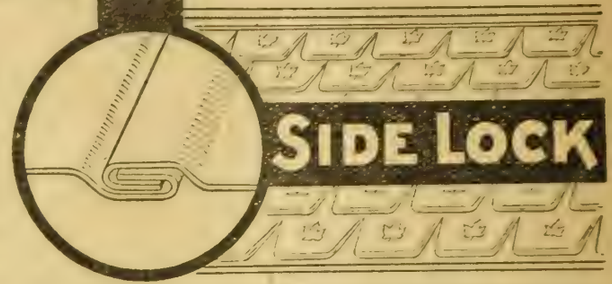
PRESTON Safe-Lock Shingles are proof against rain, snow, wind, frost and lightning. The only way to get PRESTON Safe-Lock Shingles off the roof is to remove the nails one by one and unlock each shingle separately. When you put PRESTON Shingles on your roof they are on to stay.

PRESTON Safe-Lock Shingles are the only shingles made and galvanized according to British Government Specifications. Shingles galvanized according to these specifications are good for twice the service of shingles galvanized in the ordinary way. They are also the only shingles with a Free Lightning Guarantee.

Send today for our free booklet "Truth About Roofing." We did intend to charge something for this booklet. But we will send it free as a reward to all who cut out, fill in and mail the coupon to us. Do it right now. 5

METAL SHINGLE AND SIDING CO., Limited, PRESTON, ONT.

Branch Office and Factory, Montreal, P.Q.



PRESTON SAFE-LOCK SHINGLES

King Street Factory. Please send me your new booklet, "Truth About Roofing." I am interested in roofing, and would like complete information about PRESTON Safe-Lock Shingles and British Government Specifications.

Name.....

P. O. Address.....

County..... Province.....

RUBEROID ROOFING

(TRADE MARK REGISTERED)

has given longer service than any other prepared Roofing.

RUBEROID was in use years before any of its legion of imitators.

The first **RUBEROID roofs** are still giving service and **look** good for many years more.

Most manufacturers **endeavor to prove** the merit of their Roofing by **claiming** what it **will do.**

We prove RUBEROID is **best** by showing what it **has done.**

Send for our **FREE BOOK** which gives you valuable information about **All Kinds of Roofing. WRITE TO-DAY.**

Beware Imitations

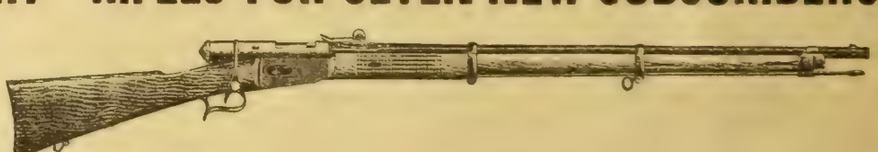
Fac-simile of the "Ruberoid Man" appears on the outside wrapper and the word "Ruberoid" is stamped in the underside of the fabric every few feet.

The Standard Paint Company of Canada, Limited,
Manufacturers, MONTREAL.

DEALERS EVERYWHERE

ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges. The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.



Address—**MARITIME FARMER, Sussex, N. B.**

and express the hopes that the construction may begin at as early a date as possible.

Whereas we believe that officers of this Association should be absolutely the choice of the majority of the members.

* * *

Therefore resolved that the election of officers should be carried out entirely by vote of the Association in a body.

Whereas it is advisable to add further to "The Dairy Industry Act" an act in addition to "The Dairy Industry Act" of 1904, relating to the testing of cream at creameries.

* * *

Therefore resolved :—1st. If a petition, signed by the majority of the patrons of any creamery, be forwarded to Hon. Minister of Agriculture, requesting an official test of composite samples of cream at said creamery, that the Hon. Minister of Agriculture shall give directions to a competent official of his department to make such tests.

2nd. Said official to be required to appear before a Magistrate or Notary Public, and make a sworn affidavit, that he shall carefully test such composite samples of cream in strict justice to all parties concerned.

3rd. Said official to be empowered to take a sworn affidavit of the proprietor or manager of said creamery and that the proprietor or manager of said creamery be required to make a sworn affidavit, before each testing time, to the effect, that he believes such composite samples of cream to have been carefully and intelligently collected and that said marked bottle contains an average of the cream sent by such patron as marked, since the last testing time.

4th. Said official shall continue to test monthly, or more often, if necessary, the composite samples of cream of said creamery, until two-thirds of the patrons of said creamery shall signify their desire that such official test shall cease.

5th. Clause (o) section (21) of "The Dairy Industry Act", relating to penalties shall apply to this addition.

6th. Forms of affidavit, etc., to be supplied by the Department of Agriculture

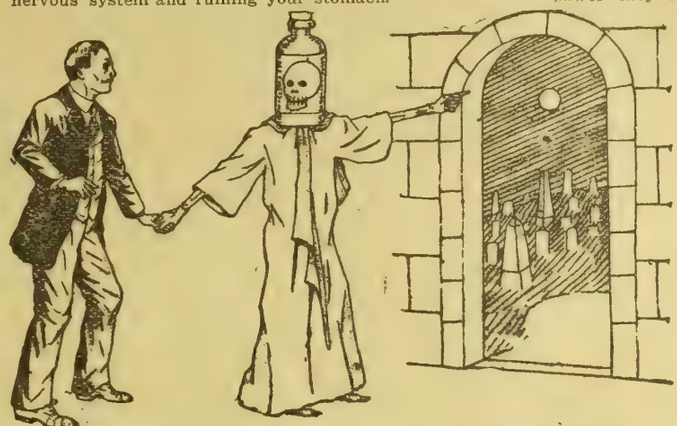
WEDNESDAY EVENING.

A talk on the home mixing of fertilizers, an address by Premier Hazen, the financial statement, showing a cost balance of $27.89, an interesting address on "Special vs. General Farming," by Fred. George, Sackville, which will be published in full in next issue, and discussions by Chas Peters, Geo. E. Baxter, Jno. McPhail, Mr. Hubbard and others, brought a most interesting and successful series of meetings to a close, and farmers returned to their homes determined, as was so ably stated by Mr. Chas. Peters, to advance along lines of Association and co-operation.

WHERE THE DRUG BOTTLE LEADS YOU

Ever wonder what kind of dope you are getting when your doctor gives you a prescription? If you ask him he will not give you a satisfactory reply. He might tell you some of the things in the prescription, but not all of them. There's a good reason why. If you knew you wouldn't take his dope and, of course, he couldn't afford to tell you the truth.

When a doctor gives a prescription to relieve pain or some chronic trouble he always puts in a little poison to deaden or stupefy the nerves. That's killing pain, or, rather, killing the nerves. Of course, if your ailment is of a chronic nature, the pain will come back and you must keep on taking the same drug or suffer. It stops the pain for a short time, but it is breaking down your nervous system and ruining your stomach.



The poisons that are used most frequently by the doctors are morphine, cocaine, mercury, arsenic and potash. The first two are used to stupefy the nerves and are responsible for thousands of drug fiends, who got the habit through the use of drugs containing dope for the relief of some chronic disease. Nature may cure the disease, but the drug habit stays with you always.

The last three poisons—mercury, arsenic and potash—are used in treating nearly all disorders and diseases of the blood, stomach and digestive organs.

You know mercury is quicksilver, and when it gets into the body it stays there. It destroys the digestive juices and eats out the lining of the stomach.

Arsenic weakens the digestive organs, makes the eyes weak, causes nervousness and inflames the stomach.

Potash destroys the walls of the stomach, produces terrible headaches, makes the blood thin and irritates the eyes, nose and throat.

The life of the nerves and organs of your body is electricity. If you are sick or ailing in any way it is because of the failure or breaking down of some vital organ. The reason any organ fails to do its work is because it lacks electricity. When it is doing its work right the stomach generates electricity for the support of the body and itself. When it is not able to generate the needed force it must have artificial aid. This is electricity, artificial electricity, as applied by Dr. McLaughlin's Electric Belt.

My method of curing disease is to go down to the very foundation of the trouble and remove the cause. When I have removed the cause, Nature will do the rest.

Electricity is a relief from the old system of drugging. It does by natural means what you expect drugs to do by unnatural means. It is Nature's way of curing disease, for it gives back to the nerves and organs the power they have lost, which is their life.

If you are skeptical, all I ask is reasonable security for the price of the Belt, and you can

PAY WHEN CURED

Dear Sir,—I got one of your Belts some time ago for a sore back, which was very painful, and prevented me from stooping so at times I could hardly tie my shoes. Your Belt strengthened my back and took the pain and soreness away entirely. I would not take $100 for it, and if I could not get another, I would not part with it at any price. I can recommend your Belt as a complete cure to all afflicted with this trouble.—W. McNeill, Colborne, Ont.

Dear Sir,—I wish to congratulate you on your success in inventing such a blessing to mankind, as your Electric Belt. I should have writen to you about my Belt before. I wore it only three weeks, then all the soreness in my back and thighs left me and my bowels became regular. Wishing you continued success in your business, I remain, W. G. Frizzell, Municipal Home, St. John, N.B.

FREE TO YOU

Get my 80-page book describing my treatment, and with illustrations of fully developed men and women, showing how it is applied.

This book tells in plain language many things you want to know and gives a lot of good, wholesome advice for men. I'll send this book, in plain wrapper, prepaid, free, if you will inclose this coupon.

I want to convince every sufferer that he can get benefit from my treatment. Nobody should be without it, for it is cheap enough, far cheaper than a course of doctoring, and I want everybody to try it. Let every one who can do so call at my office and make a full test of my battery, free of any charge.

If you can't call, send this coupon for my book.

Office hours—8 a.m. to 6 p.m.; Wed. and Sat. to 8.30 p.m.

M. K McLAUGHLIN
214 St. James St., Montreal, Can.

Dear Sir, — Please forward me one of your books, as advertised.

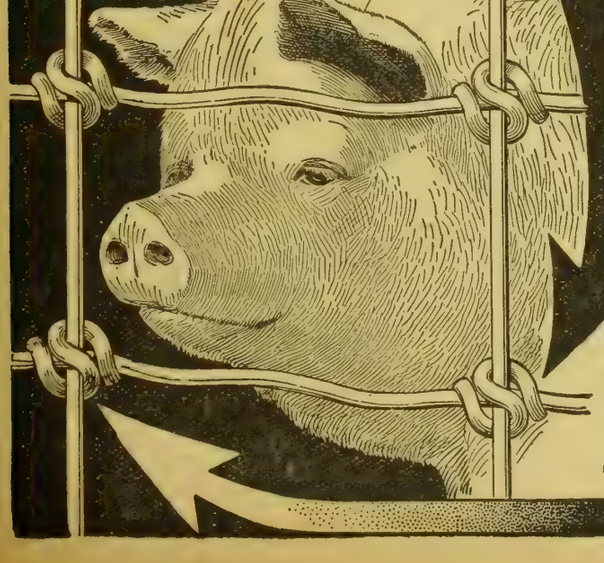
NAME .....

ADDRESS .....

F. A. KIERSTEAD,
Commission Mrchant,
City Market - St. John, N. B.
Residence, Albert St., Sussex, N. B. Phone 131
Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

MUMFORD BROS.
PRODUCE COMMISSION MERCHANTS
MUMFORD'S BUILDING, ARGYLE ST.,
Halifax, N. S.
Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application TELEPHONE 1005

SAVE MONEY.
Buy direct from the producer and save the middlemen's profit. We are large growers of Celery, Cabbage, Beets, Carrots, Parsnips etc. We ship to all the Maritime Provinces and have supplied critical buyers in Montreal and Toronto with our celery and other vegetables. They say our celery down by the sea has a flavor not to be had elsewhere.
J. J. GAY & SON,
Charlottetown - P. E. I



PUT UP THE HEAVY, HOG-PROOF

IDEAL WOVEN WIRE FENCE

You want a fence that is so heavy, stiff and strong that it will discourage any attempt at rooting. After an argument with the IDEAL your hogs will become thoroughly discouraged of trying to get under it. The IDEAL is undoubtedly the fence for you.

The IDEAL is the fence the railroads purchase because of its weight and quality. No. 9 hard steel wire throughout. Heaviest galvanizing on any fence. But the IDEAL lock is the BIG reason why you should buy the IDEAL fence. No lock equal to the IDEAL in gripping-tenacity has yet been discovered. Chances are there never will be. When stretched up, IDEAL is a very handsome fence. Every strand measures exactly true. Every lock is correctly applied. You see, the IDEAL is manufactured by the most improved fence machinery, in a plant that is considered a model among fence factories. With such superior manufacturing facilities the natural result is a fence overshadowing others in quality —and that is IDEAL fence. For further reasons read our free booklet.

Agents Wanted to Sell This Superior Fence

IDEAL Agents make the best living, because IDEAL Fence has the weight, strength and quality that make it sell easiest. Let us send you our money-making proposition.

THE McGREGOR-BANWELL FENCE CO., LIMITED, WALKERVILLE, ONT.

Chocking in Cattle.

This means the lodgment of foregin obstacle in the esophagus or gullet. It is known by slobbering, distressed breathing and accumulation of gas, which may be noticed on the left side or paunch.

The proper method of handling an animal thus afflicted is to stand the cow with her head down hill, pressing the head downward as much as possible while the attendant squeezes as much saliva out of the gullet as possible, then allow her to raise her head and give her one half pint of raw linseed oil, giving but one swallow at a time.

If she is not relieved from within ten to thirty minutes, a half inch rubber hose may be passed gently down the gullet. This will force the obstacle into the stomach, at the same time allowing the gas to escape.

If the animal has been greatly extended by gas before relieved, it may be necessary to give her a laxative and tonic to overcome partial paralysis of the bowels which sometimes follows.

Stoppage at the Point of the Teat.

A very common trouble in the ordinary dairy cow is to find an animal with the point of the teat closed, either due to a bruise of the teat itself or to infection of the milk duct which causes a little scab to form over the point of the teat and unless this is properly handled with care and cleanliness, the infection is apt to cause a loss of the entire quarter.

The proper manner in which to handle and treat such cases is to thoroughly wash the teat in an antiseptic solution, then dip a teat plug into a healing ointment and insert it into the point of the teat, allowing same to remain from one milking to another. In this manner closure of the point of the teats can be overcome in a very simple and satisfactory way.

Never use a milking tube if it can be possibly avoided as there is much danger of infecting the entire quarter by the use of the tube.

I H C CREAM HARVESTERS MEAN MORE THAN BREED OR FEED

Right breeding and right feeding are essential to the greatest milk production. But that alone does not mean greatest cow-profits. You must get all the butter-fat to put your cows on the biggest profit basis.

A "scrub" cream separator is kin to a "scrub" cow. You cannot expect big money-making results from either. You must buy the separator with a record—a pedigree—just as you buy pedigreed stock.

You want the separator that will skim to a trace; yet it must be simple enough to be kept perfectly sweet and clean—strong enough to last for years—accurately constructed and true, so it will turn most easily. And you want the machine that just meets your needs—not too large or too small—but just right.

For such a separator, look to the I H C line—backed by the I H C reputation for quality. For biggest dividends on your investment of good breed and feed—you must get one of the

I H C Cream Harvesters

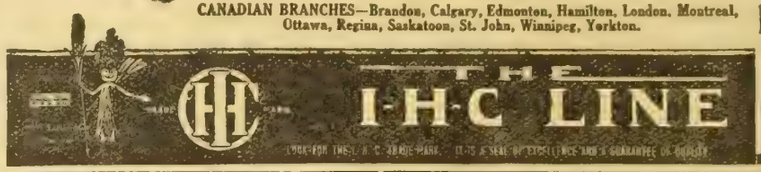
All we ask is that you investigate thoroughly before you buy any cream separator. If you do that, you will soon own an I H C.

You will note their superior construction—their many special advantages. You will find that they are the only ones with dust-proof and milk-proof gearings. You will find in them the most perfect straining device—insuring pure cream and skim-milk always. You will see that the frame of an I H C is entirely protected from wear by bronze bushings at all points; that the I H C has largest shafts, bushings and bearings; that it has the safest, simplest, surest and most economical oiling system; that the flexible top bearing prevents vibration and keeps the bowl steady, no matter how unevenly the power is applied.

When you know what these money-making, money-saving advantages mean to you—you will own one of the I H C Cream Harvesters. There are eight sizes to choose from—four sizes in each of two styles—the Bluebell, gear drive—the Dairymaid, chain drive.

Call on your local dealer or write the International Harvester Company of America at nearest branch house for further information.

CANADIAN BRANCHES—Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.



INTERNATIONAL HARVESTER COMPANY OF AMERICA
(INCORPORATED)
CHICAGO U S A.

Lead Poisoning.

Lead poisoning in cattle usually takes place during the remodeling of buildings, painting of water tanks, fences etc., or even while painting houses, painters thoughtlessly scrape out the old paint pots and dump it out into the barn yard where cattle have access to, the result being that within a short time one or more animals are noticed to have a loss of appetite, shortage of milk, a depressed look, and later excited condition.

If permitted to run loose they are apt to go around in a circle, moan, press the head against fences or walls, indicating that the brain is effected, grate their teeth and act as if they were mad.

While the treatment for lead poisonis very unsatisfactory, it would be advisable to keep lead and paints out of the reach of cattle, rather than to permit them to come in contact with it and expect to save cattle thus afflicted.

Crop Bound in Fowls.

Crop-bound is usually caused by a piece of straw or some similar obstruction becoming clogged in the opening leading from the crop, and the latter organ becomes congested with food that is unmasticated, causing fermentation to set in, which increases the trouble.

The presence of such trouble is detected by the crop becoming very hard to the touch. Formerly treatment consists of giving a dose of castor oil and kneading the crop with thumb and fingers until it becomes soft. If the trouble does not succumb to this treatment, a more vigorous one consisting of cutting through the skin of the neck and through the crop itself, freeing it of its contents and then taking a few stitches in the crop and the opening made in the skin of the neck. Such an operation, however, is seldom performed except by an expert, and only then when the crop-bound fowl is a valuable bird. Recently a new and simple operation has been practiced with success. It consists chiefly of the free use of a good fountain

Fruit Growers

DO you want other fruit growers to tell you how

NICO SOAP

AND

PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS.,
Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

Wanted Live Men.

We pay salary or commission. It all depends upon what you can do.

Each application will be dealt with as received.

Personal calls given priority.

We want men of brains—with energy.

Men, who want to make good and increase their earning capacity, who are too ambitious to drag along day after day in inferior positions.

We want several men of this class as travelling representatives of the MARITIME FARMER.

The MARITIME FARMER is an easy seller because nearly every farmer in the Maritime Provinces wants it when he sees it

To those capable of handling this proposition, we furnish with teams and pay a liberal salary.

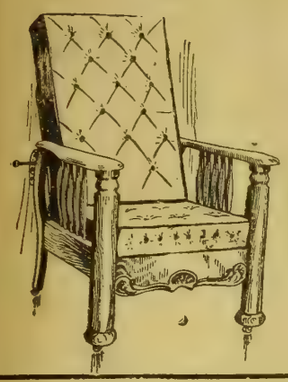
If you think you are of the right material and have a capacity for work, write us.

The Mariime Farmer,
Sussex, N. B.

Do You Need Furniture?

And Would You Like to Save From 15 to 25 Per Cent Off the Cost?

WRITE at once for our large illustrated **catalogue No. 8** showing 500 photographic pictures of the newest and best furniture on the market. Sent free to any address. Here are two examples of the big values in it:—



$8.50 for this Handsome Morris Chair

A sturdy, well-designed morris chair at a very moderate price. Frames are made of selected quarter-cut oak, highly polished and neatly carved; back is adjustable to four positions with brass adjusting rod. Two large reversible cushions with best velour coverings in choice of red, green or brown colors. Splendid valued this.

This Fine, Large, Comfortable Rocker, only $5.45

The frame of this rocker is selected oak with quarter-cut arms and carved front posts, all hand polished. Seat and back upholstered in best imitation leather with ruffled border, spring seat and buttoned back. Easily worth $10.00.

THE ADAMS FURNITURE CO., Limited,

Canada's Largest Home Furnishers. TORONTO, ONT.

syringe. A long piece of small rubber hose is attached to a can containing some very warm water. The can is set above the head of the fowl, so as to provide plenty of pressure. The free end of the hose is thrust down into the crop holding the fowl's head downward, and then turning on the water. The pressure will cause the crop to be washed out very much as one rinses a jug, and soon the contents will begin to wash out. The operation is not injurious to the fowl, and its performance requires no particular experience.

Hatching Chicks With Incubators

(Continued from prge 319)

made to sit. That is all common knowledge.

I believe the farmer is lacking in confidence. That's all. Confidence that he'll get what he pays for. Yet it is certain that he will get exactly what he pays for—no more, no less. Manufacturers' profits are not big these days. There's not much money in making incubators and brooders; and if the farmer and his wife exercise their judgement in buying; (and not expect to make "a silk purse out of a sow's ear") they will certainly be successful in the purchase and use of down-to-date equipment for hatching.

That is the way to secure the bulk of the profits from poultry on the farm,

ROBT. H. ESSEX,
Buffalo, N. Y.

DINNER BELL MUSIC.

The music of the dinner-bell is always welcome to the healthy man or woman—alike to the working man or woman who eats a plain meal at noonday, or to people of easier lives who enjoy a rich dinner in the evening. But to the Dyspeptic there is no music in the dinner-bell—it calls him to a trial for which he knows he is unfit. No one can enjoy a meal, or get nourishment and strength from it, knowing that pain and distress will follow after. The true course, even for healthy people, is to help the digestive system, from time to time, with that excellent tonic medicine, Mother Siegel's Syrup.

Mr. Michael Bureau, of Stanham, Quebec County, P.Q., writes: "For some time I suffered from Indigestion. I had headaches which made life a misery. I could not sleep at night and after eating I felt a sensation of fulness and pains, with heart palpitation. I took no medicine for this illness except Mother Seigel's Syrup and was cured when I had used one bottle of it."

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton - New Brunswick

The N. B. Farmers' and Dairymen's Convention

(Continued from last issue.)

Be it further resolved:—that in the opinion of this meeting, this can most speedily be accomplished by the owner keeping a strict account of each and every individual producer weeding out the low production animal, and breeding only from the higher producers.

* * *

Be it further resolved:—That inasmuch as this method must necessarily add more expense to the already overburdened industry, until such time as the result of such line of breeding may have accomplished the desired result.

* * *

Be it further resolved tThat the local Government of the day be petitioned to grant such a bonus, based on the individual production, as may help defray the extra expense of this proposed idea, while it is being carried out.

* * *

Be it further resolved that a committee be appointed from this Association to interview the Government with the idea of maintaining one inspector for each county as a trial for one year, and if the found productive of good results, the idea be put in force, and that

EWING'S Seeds Pay

Even if someone offered them free it wouldn't pay you to sow seeds of poor or doubtful quality.

Your crop should be worth 10 to 100 times the cost of the seed. Inferior seed will easily lose you half the crop, or from 5 to 50 times the cost of reliable seed.

Economizing on seeds is most expensive economy.

If you sow Ewing's seeds and the weather is anyway reasonable, and you give them a fair chance in the way of soil and tillage, you can depend on FULL CROPS of A1 quality — crops that will pay handsomely for the land used and the work done as well as for the small investment in the seeds themselves.

Ewing's Seeds have proved their reliability by forty years of bumper crops.

Insist on Ewing's. If your dealer hasn't them buy direct from us.

Our big Illustrated Catalogue is Free—write for it to-day.

4 **Wm. Ewing & Co., Seedsmen, McGill St., Montreal.**

Make Them Sound

A lame horse is a dead loss. Spavin, Curb, Splint, Ringbone, Swollen Joints and Bony Growths won't cure themselves. Yet you can cure these troubles and make your lame horse sound with

Kendall's Spavin Cure

just as thousands have done, and are doing today.

In the 40 years that this world's famous remedy has been on the market, Kendall's Spavin Cure has saved millions of dollars to horse owners.

Mounds, P.O., Olds, Alta.

"I have used Kendall's Spavin Cure for a number of years with great success, and I think it can't be beaten as an all-around stable liniment for Kicks, Strains, Swelling of all kinds, Ringbone and Spavin".

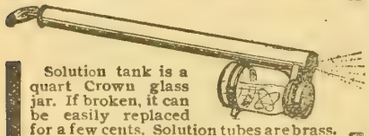
ARTHUR FLETCHER.

No telling when you will need it. Get a bottle now—$1—6 for $5.

Our book—"A Treatise On The Horse"—free at your druggists or write us 49

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

EUREKA Glass Tank Sprayer



Solution tank is a quart Crown glass jar. If broken, it can be easily replaced for a few cents. Solution tubes are brass.

None of the liquid used can be drawn back into the pump chamber, thus the chamber and valves are uninjured.

This is the easiest operated and the most effective small sprayer on the market. Inquire of your hardware dealer.

Write for our complete catalogue of Sprayers and Garden Tools.

THE EUREKA PLANTER CO. LIMITED
Woodstock - Ont. 6

Revillon Freres

ESTABLISHED 1723

The largest dealers in Furs and Skins in the world.

We pay the HIGHEST MARKET PRICE for all kinds of

Raw Furs and Skins

Honest assortment. Quick returns

Ask for our 1909-1910 PRICE LIST; IT'S FREE

OFFICE AND STOREROOMS:
134 and 136 McGill St. Montreal.

WE PAY EXPRESS CHARGES.

Mention the FARMER when writing advertisings.

The PUBLISHER'S DESK.

THE ROMATIC STORY OF A CANADIAN ENTERPRISE WHICH NOW ENCIRCLES THE GLOBE.—Long before the Canadian Pacific stretched its line of steel across the continent—while the Indian and the buffalo disputed the possession of the Prairie Provinces—while steamboats were still a novelty, and electricity almost unknown—there was established in a very modest way, in a little town of the St. Lawrence, an enterprise which has since girdled the earth.

It was not heralded in the public press or cried from the housetops, for it was not the manner of those times to take full pages in the newspapers or stretch great signs across the landscape. Yet the product of this enterprise was knows and appreciated by almost everybody in the Canada of fifty years ago. Our grandfathers looked upon the founder of this enterprise as a public benefactor, and always gave a place in their homes to the fruits of his judgement and perspicacity

The story of this discovery is the story of a most unusual search for knowledge, and its equally unusual reward.

Nearly one hundred years ago Josiah Morse graduated from one of the best medical colleges in the United States. He had heard a great deal about a remedy devised by some wandering Indian tribes, which they were said to be using with remarkable success in curing most of their common ailments. Though somewhat sceptical about it, he decided, before taking up a regular practice, to visit the Indians and investigate, probably in the hope of adventure as well as of getting some valuable information

He found a race of Indians very different from their degenerate descendants, who now hang around white settlements. Lithe and active, with keen and intelligent, if uneducated minds, they lived close to Nature, and drew from her strength and wisdom.

Dr. Morse soon discovered that the reports of their remedy had not been exaggerated—but he did not so quickly discover the secret of its ingredients or of the method of compounding them It took him many moons to gain the complete confidence of the Indians and to overcome their inbred reticence and love of secrecy. But finally, after he had lived among them for two or three years, as an Indian, they revealed the whole secret to him.

Returning to civilization. Dr. Morse took up regular practice, using wherever it applied, this Indian specific, which he prepared himself from roots and herbs. At first he used it in liquid forms, but afterwards, for convenience, he reduced it to pills, which soon became known well and favorably throughout that part of the country as "Dr. Morse's Indian Root Pills."

When he retired from practice Dr Morse sold the secret to Comstock Brothers, of New York City, and in 1857 W. H. Comstock, the present proprietor, became sole owner of the formula.

He established laboratories in Brockville, Ont., and at Morristown, N. Y., to supply Canada and the United States. He prepared the pills himself and then, with horse and wagon, he covered the Canada of that time from Montreal to Sarnia, and the Maritime Provinces as well, placing the pills in practically every cross-roads store.

The half century that has elapsed since has witnessed an enormous growth in the enterprise thus modestly launched. To-day Dr Morse's Indian Root Pills are on sale, not only throughout Canada and the United States, but the world over From the laboratories at Brockville Can —Morristown U S A.—Sydney, Australia—Wellington New Zealand—and from the branch in England, they go to seaports throughout the world. From seaport and railway station the burros in Mexico and South America, the llamas in Peru, Ecuador, Thibet and Northern China the camels in Asia Egypt and Western Australia, the bullock waggons in South Africa and the sampans on the rivers of China, carry them to the uttermost parts of the earth.

To guard the absolute purity of Dr Morse's Indian Root Pills every ingredient is prepared in the Comstock laboratories. The different roots and herbs are brought there in the crude state, ground, prepared and compounded under the personal supervision of the Comstock chemists. Nothing is prepared outside but the wrappers and boxes, so that there can be no question of the purity of Dr. Morse's Indian Root Pills This cannot be said of half a dozen proprietary remedies in America.

The Pure Food Laws of Canada Australia and the United States, wisely adopted for the protection of the public, did not necessitate a single change in any ingredient or in the formula of Dr. Morse's Indian Root Pills As a matter of fact, though thorough tests have been made every few years, by chemists and physicians, to see if the formula could be improved, it stands to-day exactly the same as when Dr. Morse brought it from the Indian encampments nearly a century ago The price, originally two York Shillings (25c), is still the same, for though the cost of the crude drugs has advanced a great deal, improvements in laboratory methods have cut down the expense of making sufficiently to compensate for this

To-day W. H. Comstock, the man who introduced Dr. Morse's Indian Root Pills in young Canada fifty years ago, alert and active, though well past the allotted "three score and ten," sits at his desk in the Head Office at Brockville, keeps his fingers on the pulse of his world-wide organization, and has as keen a personal interest in the testimonials received from the ends of the earth as when, in the old days, he got an occasional letter from some one who had been helped by Dr. Morse's Indian Root Pills.

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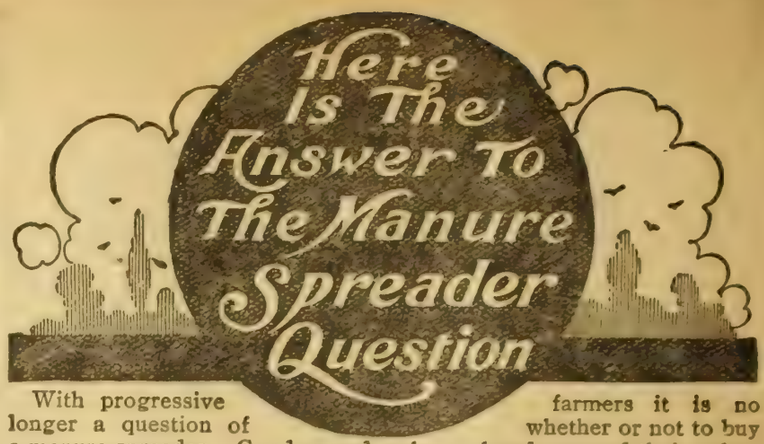

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The I H C line answers that question. Among the many styles and sizes, you will find one that just meets your needs.

I H C Manure Spreaders

embody all that is best in manure spreader construction—all that makes for greatest manure profits. They have strength in abundance to withstand the hardest usage; they are simple, sure and steady in operation; they work perfectly with fertilizer in any condition; they are exceedingly light in draft.

I H C manure spreaders are made in three styles; each style is made in three sizes, ranging from 30 to 70 bushels capacity. Corn King spreaders are of the return apron type; Cloverleaf manure spreaders have endless aprons. Two styles of feed are furnished—either ratchet or double pawl worm gear. There is an I H C to suit each requirement—large sizes for large operations, medium sizes for the average farmer, small sizes for orchards, vineyards—for every condition. I H C spreaders have lime hoods to spread commercial fertilizers; drilling attachments to distribute manure in rows. Whatever I H C spreader you buy will pulverize and spread manure or commercial fertilizer perfectly. You will find it durable, and it will net you big dividends on your investment.

Manure is the cheapest and best fertilizer but it must be handled and spread right or most of its value is wasted. You must have an I H C manure spreader to get 100 per cent value out of the manure. I H C spreaders are doubling the crops of others. The one that suits your needs will do it for you.

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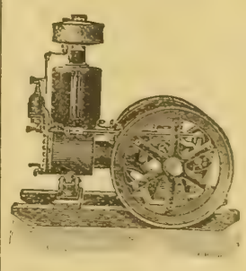

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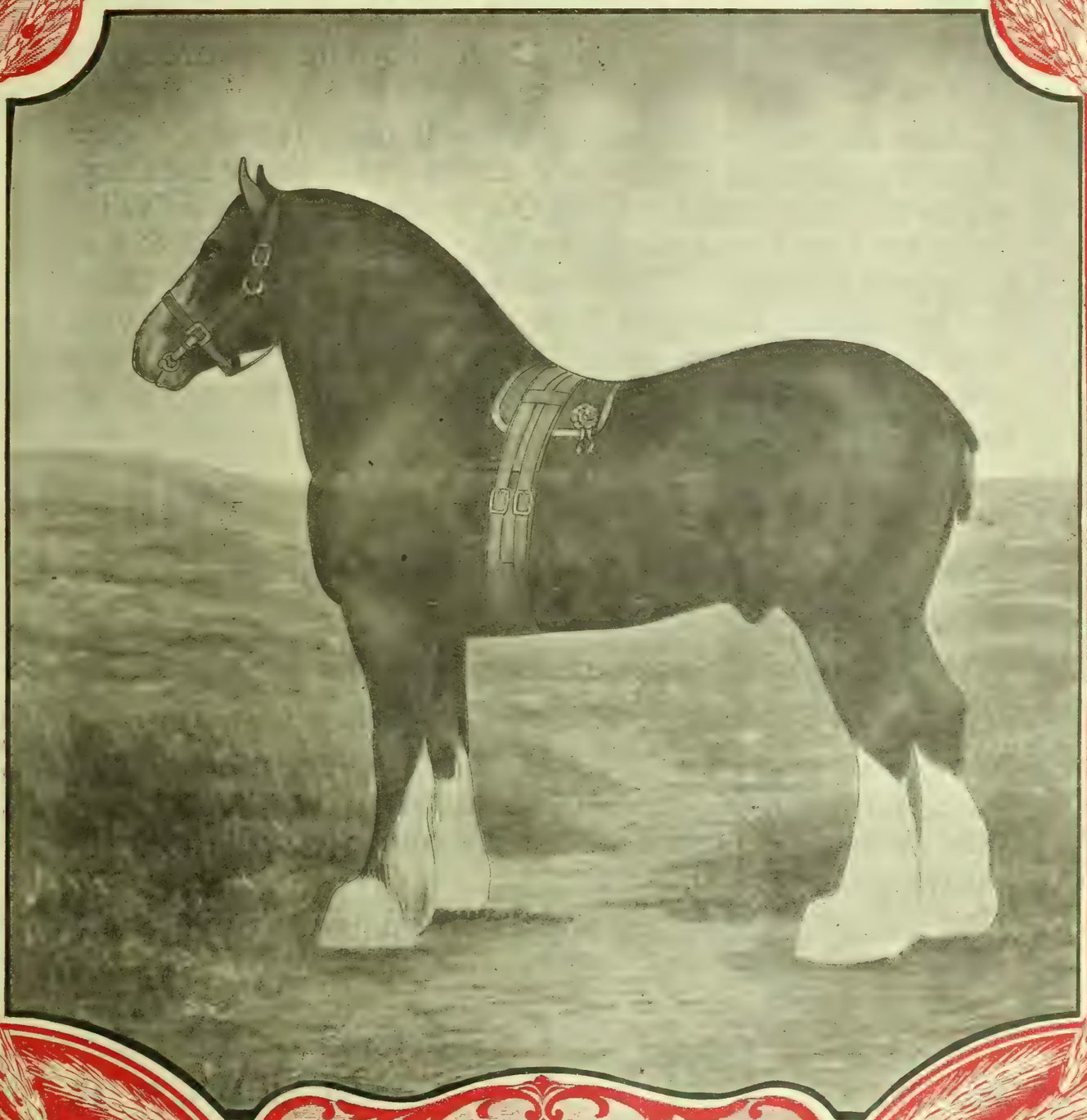

SPRING 1910

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The MARITIME FARMER AND CO-OPERATIVE DAIRYMAN

Published twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada

Vol. 15. SUSSEX, N. B., APRIL 12, 1910 No. 13

Preparation of Soil and Grain for Seeding.

By L .S. Klinck, Macdonald College.

THE time to begin the preparation of soil for seeding is the preceding summer; the time for preparing the seed is during the winter months. If the land intended for this season's small grain crop has not already been well plowed it cannot be properly prepared for the crop of 1910; if suitable seed has not yet been obtained there is still time to do so although the eleventh hour is upon us.

The fact that the available area of land in the Maritime Provinces, well adapted to the profitable growing of small grains, is comparatively restricted in comparison with the immense areas in Manitoba, Saskatchewan and Alberta, and that the productive capacity of our soils is more rapidly depleted than theirs, makes it all the more imperative that our fields intended for small grains be more carefully prepared and that the seed sown be given the closest attention.

With but few exceptions early fall plowing, for our staple crops, has proved to be better practice than spring plowing. Fall plowing prevents the seeding of weeds, holds insects in check, equalizes farm labor, makes conditions more favorable for the absorption and retention of rainfall and snowfall, increases the pulverizing action of frost and enables the land to be seeded much earlier in the spring.

A moment's reflection will show the practical bearing each of these factors has on the production of good crops. As a concrete example of the influence of one of these factors, allow me to give the results obtained at Ste Anne in an experiment on time of seeding. The and was uniformly fertile, fall plowed and all conditions were the same except the time of seeding. In conducting the experiment, six seedings were made of each class of grain (wheat, barley, oats, peas, emmer and spelt) and as the seedings were one week apart the sixth seeding was made five weeks after the first. The results of three years work are striking and suggestive. They show that spring wheat, seeded as early as the ground could be worked without injuring its physical condition, averaged 35.55 bushels per acre while that seeded five weeks later averaged only 15.52 bushels per acre—a decrease of a little over twenty bushels per acre due wholly to the time of seeding. The falling off in quality was likewise very apparent. The other grains showed the same tendency although not so pronounced—oats showing a decrease of 11-21 bushels and barley 4.1 bushels per acre. These experiments have demonstrated thatunder our conditions all small grains, with the exception of field peas, should be seeded in the spring as soon as the ground can be worked to advantage. This early working is possible only when fall plowing is practiced.

All classes of grains except barley and peas showed a gradual decrease in yield as the time of seeding was delayed. To illustrate:—The first seeding of wheat gave an average of 35.55 bushels, the second 26.97 bushels, the third 26.10 bushels, the fourth 23.05 bushels, the fifth 15.90 bushels and the sixth 15 52 bushels per acre—a strong argument in favor of early seeding and also directly of fall plowing.

A word as to the preparation of seed. It should scarcely be necessary to say that the procuring of the best class, variety and strain for our local conditions is fundamental; and yet so long as large quantities of western feed grain is used for seed, just so long will there be occasion for emphasizing the superior value of acclimated seed or of obtaining new seed through reliable seedmen. The frequent low percent of germination, coupled with the noxious weed seeds it so often contains, to say nothing of the grower's lack of knowledge as to the producing power of the variety, should debar any feed grain from being used as seed.

Screen and fan all seed grain thoroughly and reserve only the plumpest and best developed grains for seed. If necessary, run the grain through the mill two or three times. The light seed and the small seed will be just as valuable for feed as before, and, in addition, practically all the weed seeds will be removed.

Having, then, secured the best grade of seed possible, a germination test should be made even when the grain is of our own growing. Late or wet harvests frequently seriously reduce the percent of germination in oats and so weaken the vigor of the resulting plants. An accurate knowledge of the percent of strong vital seeds will enable us more intelligently to estimate the correct quantity to sow.

In testing seeds most farmers prefer a germination box filled either with sand or with a light loamy soil which will not readily puddle or bake. A box 1′x1′x3″, inside measurement, will hold 100 seeds planted 1″ apart each way and still leave ample margin around the outside. The easiest way to mark off the ground for planting is to make a lid the size of the box and mark it off into squares 1″ each way. At the points of intersection drive small nails. In the depressions made by these nails, when the lid is placed on the box, place the seeds. The ordinary cereals should be planted about 1′ deep. Keep watered and keep in the living room at ordinary temperature.

In case earth cannot be procured, take an ordinary dinner plate, and after saturating several thicknesses of blotting paper, place these on the plate. Then count out 100 or 200 average grains. Place these on the wet paper, cover them with several thicknesses of wet blotting paper and invert a second plate over the whole. Keep the paper moist, but not wet, and place the dish in a room having a temperature of about 70 degrees. As soon as the grain sends out both root and stem remove them and make a record, not only of the number that germinate, but also note the vigor of growth from the different seeds.

When oats have come from a field infected with smut the seed should be treated with formalin. One pint to 40 gallons of water will give best results. Spread the oats out on the barn floor in a thin layer; have one man shovel the grain over while another sprinkles the solution on with a watering can until all the grains have been moistened. Then shovel the grain into a pile against the side of the barn and cover it with old blankets or bags so as to prevent the gas from escaping too rapidly. Leave the oats covered over night and in the morning spread them out in a thin lawer to dry before seeding.

A GOOD INVESTMENT.

Bear River, Nova Scotia, April 2, 1910.

Publishers the MARITIME FARMER,
Sussex, N. B.

GENTLEMEN:—

I have your valued favor of 1st with bill, which I am returning herewith enclosing also $1.00 covering my subscription to April, 1911. During the past twelve months it has been a pleasure always to receive the MARITIME FARMER, each issue being worth more than the charge you make for the entire year The excellence of your reading matter should, we believe, commend it to everyone engaged in agricultural pursuits in the Maritime Province, and we know of no investment which should yield better returns than the time spent in a careful perusal of the excellent articles appearing in your journal.

With best wishes for continued success, I am,

Yours very truly,

W. G. CLARKE.

Interesting Maritime Boys in Farm Life at Home.

By Rev. P. C. Gauthier, D.D., Palmer Road, P. E. I.

Rev. P. C. Gauthier, D. D.

Editor Maritime Farmer:—

As the time approaches for the husbandman to cast the seed once again into the furrow, his thoughts naturally turn to the farm and its possibilities. There are many problems which have been and are still agitating the minds of our farmers in these Provinces by the sea and one of these is how are we going to keep our boys on the farm? The solution of this problem, on account of its paramount importance, and its far-reaching results is certainly worthy of the serious and undivided attention of all right thinking men, all who have at heart the prosperity and advancement of this fair portion of Canada. We can never hope to make farmers of all our boys, nor is it desirable that we should endeavor to do so, for many of them are naturally inclined and fitted for other professions or callings, but a goodly number leave the farm and fail in their chosen professions, who would have been successful farmers had they been taught at an early age to appreciate at its just value the nobility of agriculture. However, the enthusiast is abroad and thanks to him, agriculture is becoming, with many of our people, a labor of love rather than one of necessity.

Our educationists have been accused and justly too, of educating our boys and girls off the farms. The ideals placed before our boys in our schools and colleges by their teachers have been men who have attained the utmost rung of the ladder in the so-called liberal professions, great and good men, we admit, men whom we honor but too often these educators of youth have forgotten that the most noble, the most honorable, the very basic profession upon which all other professions depend is agriculture, and the real nation builders, the successful farmers have been flippantly passed over as not worthy of the attention or eulogy of these would be educators. The farmers themselves have been somewhat to blame for they have too often lost sight of the fact that home education is calculated in a great measure to form the child's aspirations for the future. Many a father and mother have to blame themselves today if, in their declining years, they are left alone on the old homestead which must eventually pass into the hands of strangers. Had they been less pessimistic and had made farming less a drudgery for their children their sunset of life would have been made radiant and bright by the presence of youthful lives round about them. Boys and girls must become interested in their work if parents want them to work cheerfully and well. Farmers give your sons and daughters an interest in some side lines of farming, such as poultry raising, dairying, or a few acres to cultivate. I know a farmer, a successful one too, who rents to each of his boys aged respectively fifteen and sixteen, five or six acres of land which they till under his supervision and guidance. They buy the seed from the father and sell him the grain when harvested at the highest market price and after having paid rent and fertilizer they add the balance to their bank account. So interested have these boys become that instead of having to spur them on in their work the father was to moderate their ardor. Let every farmer who has boys try this method and note results. Farmers give your boys and girls a good time. Allow them an occasional holiday during the summer months; take them with you to fairs and exhibitions and they will be less apt to envy the lot of our provincialists abroad who come to us to spend the summer and eat the fatted calf.

The school, the home, public sentiment are all factors in the education of the child and these all can do much to bend the young mind towards agricultural pursuits. The farmer of today, however, to win in the race, needs a higher agricultural education than the home or the common school can supply. No man can succeed in any profession unless he loves his work and the greater the knowledge of that work the greater also the appreciation and love of it.

At a meeting of farmers a few days ago one of the speakers said, and he seemed to know what he was talking about, that ten dollars invested in

MEETING OF THE WATERS, MATAPEDIA AND RESTIGOUCHE, WITH RESTIGOUCHE ("MILLIONAIRES") CLUB HOUSE IN FOREGROUND.

agricultural education paid better than one hundred invested in land. Men who have had the advantage of quiring a good agricultural education will certainly vouch for the truth of this statement. We see farmers ready to pay hundreds of dollars to educate their sons that they may become lawyers or doctors. They even think nothing of mortgaging the old homestead to this end. Yet these same farmers cannot afford a single penny to give an agricultural education to the boy or boys who stay at home. If we want to keep our boys on the farm nothing must be spared to give them the highest appreciation of their profession and this can be attained only by the best education this country can afford. We have in our midst an Agricultural College which is destined to revolutionize our conditions and that for the better if we know how to appreciate and encourage it as we ought. The great majority of our farmers can well afford to send one or two of their boys to this college during the winter for two or three months. The knowledge acquired, and as a consequence the new zest and enthusiasm manifested by these boys in their work on the farm would in one year more than compensate the father for the money invested. The farmers in these provinces must be up and doing if they wish to keep pace with the other parts of Canada. Agricultural education holds an honored place in all the other provinces. The Great West Ontario, Quebec, are showing themselves alive to the importance of such an education. Our legislators in these Eastern Provinces are also realizing that our national prosperity nay our very national life depends on our farmers and are doing much to encourage and educate them. Let the farmers themselves therefore appreciate their opportunities and thake the advantage of the helpful education which, experimental stations, Farmers' Institutes, and our Interprovincial Agricultural College at Truro, are calculated to bestow.

Let us ever remember that our fathers have left us a goodly heritage, a heritage which they claimed from the wilderness at the price of many sacrifices, great toils and labors and that we are in duty bound by the law of solidarity and by the love we bear to this glorious patrimony, to hand it over to our children not with the mark of deterioration upon it but richer and more valuable than we found it and that we must teach our children to pass it over to their children with the fruits of their best endeavours stamped upon it.

Can New Brunswick Farms be Successfully Operated Without Live Stock?

BLISS M. FAWCETT.

The subject, "Can New Brunswick Farms be Worked Successfully Without Live Stock," is one that I will need to discuss very carefully considering that our worthy President is to follow on commercial fertilizers.

Would it be possible for a watch to go without wheels?

If Edison had not been born would Dreadaughts be the topic of to-day?

If the wizard Marconi had not come out of Spain, what of the messages, that are now thrown through the heavens, to our corner of Christendon.

Someone has said, "without live stock agriculture is a failure."

Who ever made a good captain without first learning how to splice a rope?

Who can realize the beauties of nature without having spent many days, watching the development from early spring till the leaves fade in in the autumn.

Tell us a living person who has seen a well worked farm without having live stock as the basis of its productiveness.

This is an age of experiments. Old ideas are discarded for the new. Men everywhere are looking for an easy job, or one that requires a high collar, a white vest and six hours out of the twenty-four. This searching out for invention has reached the boys and girls on the farm. "I am going to college and after that become rich in the city," says the host of them. "Never will I tend chickens, feed pigs, train colts or plow. Not for me to sit under a cow and smell of the barn. No! I am created for the noble city, some day to be Mayor, or Bishop or Governor General."

The President looks at me and wonders, what has all this to do with the subject "Can New Brunswick Farms be Kept up Without Live Stock?" Listen: These very things happening every day, are the chief causes of the dimishing of live stock of all kinds.

Can we run our farms without the boys? Can we be satisfied to stay at home, while all the refined, intelligent and smiling maidens go to the cities? The conundrum goes, If all the girls go to China, where will the boys go? To Peek-in, Pekin. This is where we find ourselves, at this critical time in New Brunswick agriculture. The few who are left on the farms cannot possibly keep up the herds of cows, sheep, horses, poultry, pork raising and all the other important features so necessary in agricultural life. Evidences of this are seen on every hand, as we go here and there throughout every county in the province.

Mr. Wetmore will follow me this evening and give grand accounts of the several stimulating commercial fertilizers. Certainly they will make a garden plot to "Blossom as the rose" and the yields of several acres, in almost any case, to be enormous. But, gentlemen this is not agriculture. I can take you to thousands of large farms in this province, that have dropped out of live stock,where ox eyed daisies, and weeds of all descriptions can be seen as far as the eye can reach. Why? Simply because everything has been taken out of the soil and nothing has been replaced.

Did you ever roam around a farm of one or two hundred acres with a large herd of cows pasturing? Did you ever see the farmer and his sons milking those well fed animals? Watch the heavy loads of milk going to the factory. The broad-backed steers going to market at 10c. a pound. Heavy draft horses, sometimes trotters, too, going to the city at big prices. Can you find weeds and small returns from that man's establishment. Follow him to the Bank and you will find a deposit. Go to the church and he will be building the steeple. Follow him over his domain and you will behold a picture of well cared for live stock and growing crops, the beauty of which cannot be surpassed this side of the "Pearly Gates."

Live stock surely is the only keynote to New Brunswick prosperity. With them is the entire bread of life. With them is kept up the fertility of the soil. With barnyard manure which beats everything to grow the tender blades. The table is ladened with delicious viands of every description, luxuries in fruit without number, in fact everything that mortal man would care, is held out in those two words "Live Stock."

Depend on commercial fertilizers, and what have you? Put your hand deep in the leather bag and pay $40.00 a ton for your potash. 'Tis true a good yield will be the outcome on a very small area. But my! No stock to eat anything. No cows for the boys to get, no chores to do. After the harvest, lie dormant through the chilly days and months of the winter. What a picture!

Politicians, Doctors, Lawyers, Preachers, Statesmen, everybody when addressing an agricultural gathering will say. "The farm with its green pastures, the quiet country life, its overflowing everything. You are the blessed of the earth." Not a living soul ever put that into practice and reared a farmer.

The Government of New Brunswick is up against the hardest problem in the history of the province. Smile, as you may, we farmers swing the multitude, or perhaps I should say, we can. Mostly always its live stock by the thousands. The several governments have bonused cheese and butter factories by the score. The doors of most of them are today closed. If we live in this country the very first thing we want is milk, butter and beef. For ten years, New Brunswick has been importing these things from Ontario and Quebec. 1909 was the largest importation of all, amounting to thousands of dollars.

In many sections of the back districts most excellent farms are for sale by the hundreds. Strong endeavor is being made to stop some of the coming immigrants and locate them here. They will move out very soon after they come,unless the present government places on their platform at once the policy, "that Live Stock is the only basis of successful agriculture."

The Laymen's Missionary movement, is endeavoring to christianize the world in 25 years. Along with that let this Government take up the the political lawyer swings us. This province in 20 years has decreased Live Stock question and urge into the highways and byways of the province. Send out men and instruct the new comer how to make a dollar. Not much use to preach religion to him, if he is as poor as a Russian Surf. Help his pocket by showing him how to raise Live Stock of all kinds. This certainly is the only means of holding those who, are here and retaining those who come.

In that day when the hardy son of form and I say it now, that we should hang down our heads when we think of so much beef, poultry, flour, farm machinery and thousands of tons of milk feed that keep pouring in from the West when Live Stock raising would stop it all.

We should condemn ourselves, too, that the Legislature yonder, is not half from the farm. I say, if that was so, these things would be changed and that very suddenly. It is not their fault it is ours. I say also, that it would be a wise policy for this Government to pass a resolution asking that in every constituency one farmer be sent to Parliament. Then, and not till then, will we, who comprise four-fifths of the population get justice.

In the day when the hardy son of toil becomes supreme, Live Stock will be scattered over this beautiful New Brunswick. The vacant farms will be re-stocked. They will cease importing and be exporters. The population will increase, land will be more valuable, the revenue will increase and everybody in Christendom will listen to the Preacher. Up then my "brother man." Let Anglo Saxon justice be famed forth and as the Western gates are open inside to people from every clime, so let us assert our independence and let the East show to those who happen within our borders, that New Brunswick is shoulder to shoulder with any portion of this fair Canada.

Paper read by Bliss M. Fawcett, Sackville, N. B., before the New Brunswick Farmers Association'

OWNED BY JAMES BENNING, WILLIAMSTOWN, ONT.
Will be offered at his dispersion sale, April 20th, 1910. See ad. elsewhere in this issue.

Bacteria in Relation to Rural Life

Some Friends, Others Foes

By Prof. M. Cnmming, Truro, Nova Scotia

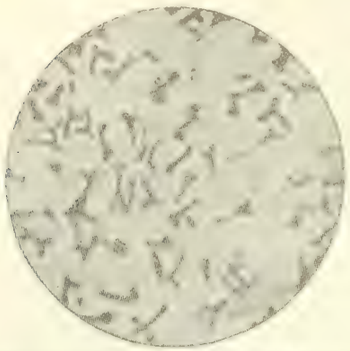


PLATE 1.—This shows bacteria from nodules on the Hairy Vetch, as they appear under the microscope which has magnified them 1500 times.

No forms of life are of more interest nor affects mankind to a greater extent than bacteria. These are minute living things lying on the border land between plants and animals. They float in the air we breathe and in the water and milk we drink; they exist in the food we eat, in the soil we till, in all animal and plant remains and even in our living bodies. They are so extremely small that they cannot be seen without the aid of powerful microscopes and, hence, although so omni-present, and so much written about and discussed, few realize the important functions they perform in nature.

Were I to inquire of my readers in regard to their notions about bacteria, I fancy that, from most, I would hear of bacteria as the cause of such dread diseases as typhoid, diphtheria and tuberculosis, and would hear very little of them as the benefactors of mankind. It is our purpose, in the course of this paper, to discuss bacteria, not alone as the cause of disease, but to a greater extent as the benefactors of mankind and especially of the farmer.

CHARACTER OF BACTERIA.

Bacteria stand on the lowest plane of life and are the smallest organisms that are known to exist. They differ greatly in size, but are of an average diameter of about one thirty thousandth of an inch, which is so minutely small that, if a hundred individual germs were place side by side, their total thickness would not equal that of a single sheet of paper upon which this page is printed. Unlike higher forms of life, which are composed of many cells grouped together, each bacterium consists of a single cell, but these cells vary in shape. Bacteria are classified into three main groupes in accordance with their variation in shape. These are:—(1) The spherical or coccus form. (2.) The rod shaped or bacillus form and (3) the spiral or cork-screw or spirillum form.

THE FOOD SUPPLY OF BACTERIA

The majority of bacteria live upon dead inert organic matter, such as meats, milk and vegetable material. A smaller group among which are the disease producing germs, derive their nourishment from the living tissues of animals or plants.

MOVEMENT OF BACTERIA.

Many bacteria are unable to move by means of their own organs from through the soil, the air or any place to place. These are diffused other body by means of currents of water, the wind and by being carried in various ways. There are classes of bacteria which are endowed with powers of locomotion These move by means of fine, hair-like outgrowths developed on the outer surface of their cells.

RATE OF GROWTH.

Under normal conditions, bacteria multiply rapidly. The rate varies with the food supply and the temperature. Some species flourish when the temperature is near freezing point and other flourish when the temperature is considerably above blood heat. The optimum point for the greater number is a little below blood heat. To give some idea of the rapidity of growth, we may state that if a single bacterium were to be placed in milk at a temperature of about 90 degrees F. it would divide and become two in about 20 to 30 minutes, and these two would become four in another 20 to 30 minutes. At this rate, it is estimated that if favorable conditions could be sustained, there would be produced in 24 hours as the off-spring of a single bacterium some 17,000,000 descendants. However, under a state of nature, this enormous rate of increase is not attained, for as the bacteria multiply, they produce acids and other matter which is unfavorable to their growth and so retard the rapidity of their development. Nevertheless, under reasonably favorable conditions, bacteria multiply at an enormous rate.

PLATE 2.—This shows roots of a common Red Clover plant with the nodules, in which the bacteria live, natural size.

HISTORY.

Bacteria were first beheld by Leeuwenhoek in 1675. However, it was not until 1876 that, as a result of the studies of such well known men as Dr. Koch and Pasteur that any-

A GOOD FOUR HORSE TEAM

thing of a definite character come to be known about these forms of life. The science of bacteriology may, therefore, be said to be little more than one-third of a century old and when we consider the immense amount of information and application there-from, which have been derived in this short period, we cannot but wonder what will be the outcome when the mind of man has been applied to this study for as many years as to the study of other subjects.

BACTERIA THE CAUSE OF DISEASE.

The earlier studies of bacteria were largely confined to a study of these organisms as the cause of disease. In 1876 Dr. Koch demonstrated that anthrax was caused by bacteria and since that time it has been ascertained that typhoid, tuberculosis, diphtheria, pneumonia, scarlet fever, lock jaw, etc., and various intestinal troubles are caused by these organisms. Prior to the discovery that such diseases as the foregoing were caused by bacteria, methods of treatment and sanitation were much less effective than those methods which are now practiced, for with a knowledge that bacteria caused such diseases, bacteriologists and doctors have devoted their attention to controlling the action of the bacteria and thus preventing the development of such diseases. For example: Following the discovery that diphtheria is caused by bacteria, bacteriologists developed an anti-toxin, which causes the activity of diphtheria bacteria to cease. The following figures, quoted from the Metropolitan Hospital, of London, England, indicate how successful this treatment has been in comparison with former methods. During the years 1890 to 1903, before antitoxin was used, out of 7101 cases of diphtheria treated, there were 2161 deaths, i. e., 30.39 per cent; whereas, in the year 1903, when antitoxin was used, out of 4839 cases, there were only 493 deaths, i. e., 10.1 per cent. Moreover, in those cases where antitoxin was administered on the first day of the disease, there were practically no deaths. Similar instances, such for example, as the pasteur treatment which is now used to prevent the development of rabies in people who have been bitten by mad dogs, might be multiplied, but we have shown sufficient to indicate the great value of the study of bacteriology to mankind.

BACTERIA AND THE WATER SUPPLY.

All surface waters contain bacteria, which may vary in numbers from a very few to many millions per glass of water. These bacteria come from the soil over which or through which the water may run, from sewage and from various other sources. The number of bacteria in water is not exactly as would be expected in accordance with our ideas of pure water. The water in the running brook is generally thought to be purer than that of the stagnant pond. Generally, however, the opposite is the case. The reason for this is evident. Brooks form the drainage system of country and into them is washed the surface drainage of the land, which is rich in bacterial life. In the pond or lake some of these bacteria die and the majority settle to the bottom, so that pond water is generally safer to drink than the water of running brooks, be it ever so clear and bright.

SEWAGE CONTAMINATION OF EATER.

In determining the purity of drinking water, it is not so much the number of bacteria as the kind that is of importance. A stream, for example, which flows through an uninhabited section of the country

A GOOD HATCH

may carry many bacteria with it, but such bacteria may be perfectly harmless, but a stream which flows through an inhabited section of country may be polluted by the sewage of that country and may, from this source, derive bacteria of the most deadly character. There is, therefore, no more important subject to be considered in dealing with the health of urban or rural communities than to make sure that the water supply is free from sewage contamination and so, free from bacteria that may cause disease. The present out breaks of typhoid in Montreal and Toronto are generally considered to be due to sewage contamnation from some source or other in the water which the citizens have to consume.

In the country, the greatest danger attaches to wells. All surface wells are more or less dangerous. The greatest danger exists when the surface of the well is lower than the surrounding land, so that when a freshet occurs, surface water can run in. Provided, however, that the masonry of the well is so constructed as to prevent surface drainage and that the ground slopes away on all sides, danger from this source may be reduced to a minimum. There is still, however, great danger especially in open and gravelly soils that sewage may drain down through the soil and that the germs contained may gain access at the bottom of the well. The deeper the well the less danger from this source. In fact, if the well is sufficiently deep, its masonery sufficiently tight to prevent water from getting in at any other source than the bottom and the top so constructed that surface drainage is impossible, danger may be reduced to a minimum. Above all things, one should see that the well is a sufficient distance from the house and out buildings to prevent any possibility of human contamination. By all odds the safest well is the bored or artesian well.

BACTERIA THE SCAVENGERS OF NATURE.

Have you ever wondered what would happen if with the death of animals and plants no decomposition were to occur? Or have you ever wondered at how quickly, under the processes of nature these things are removed from sight? Bacteria are the agencies which attack these complex animal and plant remains and resolve them into their simpler forms, in which they can again be made use of by succeeding plant and animal life. A mighty forest tree has fallen to the ground and lies there an obstacle in the way. As the years go by, minute bacteria attack it and gradually cause it to crumble and finally disappear from sight. These bacteria work in droves of millions and millions. Each one does a very small portion, but unitedly, as scavangers of nature, they make this world a habitable place, whereas, without their presence there would be such an accumulation of vegetable and animal remains that the world would become an impossible place in which to live. In the year 1818, John Young, then known as Agricola, who of course did not know the means by which this decomposition was brought about, but who recognized the fact, wrote thus: "I know no indication of greater skill in the Divine Intelligence, nor a more indubitable mark of his care and goodness, than this contrivance of resolving all dead animal and vegetable matter into elementary principles; that, in the first place, he might relieve the earth of such loathsome incumbrances, and in the next place, be supplied with fresh materials out of which to form and sustain the new and successive families of plants." From this standpoint alone bacteria are infinitely more the benefactors than the enemies of mankind.

EXERCISINC THE BULL

BACTERIA IN THE SOIL.

The superficial layers of soil teem with bacteria, which may vary in numbers from scarcely more than a few thousand to six hundred million or even more per ounce of soil. In the lower areas the numbers become less and less, until four or five feet below the surface there are no bacteria. A knowledge of the presence of this teeming life in the soil has changed our conception of the soil from a mass of inanimate particles to a laboratory, in which millions of bacteria are constantly at work transforming highly complex and unavailable substances into simple substances suitable for the food of plants. In dry, sandy soils, poor in humus, the numbers of bacteria are low; whereas, in rich, loamy soils, containing a quantity of humus, their number is very large. In general,those soils are the most valuable in which bacteria are most numerous and vigorous. In any given soil the number of bacteria will vary with :—

1. — The temperature of the soil. This is controlled largely by drainage and cultivation.

2.—The moisture content of the soil. Dry soils are low in bacterial life. Moist (not wet) soils are rich in bacterial life. Drainage and cultivation are the principle means of controlling this.

3.—The amount of humus in the soil. The more humus the more bacteria. One of the great reasons why barnyard manure is a more satisfactory manure than any commercial fertilizer is because it adds humus to the soil and thus affords conditions for the development of that bacterial life. Besides, barnyard manure is very rich in bacteria and directly add these to the soil.

KINDS OF BACTERIA IN THE SOILS AND THEIR FUNCTIONS.

There are many species of bacteria in the soil. The function of the greater mass of them is to cause the decomposition of vegetable matter and so render this matter into simple forms available for plant food. Plants can make no use of fresh barnyard manure or of a freshly plowed grass or clover sod. The vegetable matter contained in these is in too complex a form to be used by them. The real role which bacteria play in the soil is in transforming this complex material into simple forms available for plant food. So important is this role that farming without the aid of bacteria would be an impossibility, for the plants would have no available food and the soil would yield no crops.

Some species of bacteria act upon the carbonaceous matter, (crude fibre, starch, etc.) of plants and break it down into such fine particles that it becomes an integral part of the soil. Some of this carbonaceous matter they resolve into the carbon dioxide of the air, which in turn becomes the food of another generation of plants; other parts of this carbonaceous matter they resolve into organic acids, which act upon the mineral elements of the soil,such as the phosphorous, potash, lime, magnesia, etc., and make these available for plant food. It is largely

OLD FRENCH FORTIFICATIONS AT ANNAPOLIS

through this formation of organic acids that bacteria cause such material as bone meal to decompose and yield up its plant food to the soils; for the plant food contained in ground bone is in an unavailable condition and must be transformed into simpler forms before it can be used by plants. Without bacteria this transformation would not take place and bone meal and similar fertilizers would produce no results. There are other species of bacteria which act upon the complex nitrogenous compounds and render them into simple nitrates, which can be used as food by plants. There are several different stages in this process of decomposition and each stage is effected by different species of bacteria. The process in the soil is the same as that which goes on in the manure heap. First ammonia is formed. This we readily detect whenever we enter the horse stable. Then a new class of bacteria change this ammonia into nitrous acid and still another class change this into nitric acid, which unites with the lime, magnesia, sodium and other bases in the soil or manure heap and in that form is used as the food of plants. This process goes on very quickly when the temperature is high and the air circulates freely, two conditions which must be prevented if manure in the barnyard is to be saved without under-going loss. In the soil, however, it is important to encourage this process, for in no other way can plant get the abunddance of food they require and, hence, if the best crops are to be produced in the soil, we recommend under drainage and frequent tillage, which are the principal means by which the temperature of the soil can be kept sufficiently high and air freely admitted.

BACTERIA WHICH ADD NITROGEN TO THE SOIL.

Thus far we have treated of those bacteria in the soil which transform, but do not add to the plant food of the soil. This class of bacteria may, in a measure, be compared to our manufacturers who do not produce material but who take the crude material supplied from some other source and manufacture it into forms suitable for the use of mankind. But there is another class of bacteria with which we will now deal that are constructive and add to the soil's content of plant food. Such are more comparable to the farmers who actually produce material, adding, by their operations, to the earth's supply necessary to the sustenance of man.

These are: 1.—The nodules or legume bacteria, which live in the nodules on the roots of clover, peas, and other plants of the legume family. From their method of living, together with other plaots, these are termed symbiotic bacteria (from the Greek, living together with). And 2.—The non-symbiotic bacteria (not living together with) nitrogen fixing bacteria which live in the soil independent of other plants.

LEGUME BACTERIA.

The public are pretty well informed in regard to the character of legume bacteria. These live, it is now known, in the nodules which abound on the roots of clover, peas, vetches and other plants of the legume family. These bacteria, unlike plants, can live upon the free nitrogen of the air and they give this up to those plants in whose roots they find lodgement. As a result, soils on which clover grows are found to be richer in nitrogen after the clover had completed its growth than at first. Experiments have shown as much as 25 to 150 pounds of nitrogen actually added to a soil in this way through the growing of clover, or peas or vetches; whereas, had such non-leguminous plants, as oats, or buckwheat, or potatoes been grown, there would be no increase in the nitrogen content of the soil. Now nitrogen is one of the essential elements of plant food and it is the most expensive. It costs from 15c. to 20c. per pound, in comparison with from 5c. to 7c. for a pound of phosphoric acid or potash, the other two most important elements of plant food. It would, therefore, seem that it would pay well for farmers to cultivate the acquaintanceship of such bacteria and in every way to encourage their growth.

Although these facts are now well known, yet it was only in 1886 that, through the studies of Hellreigel and others that their exact nature was understood. Away back in early Roman times, the soil-enriching qualities of legumes were known and commented upon by the leading Roman writers on agriculture. However, during the dark ages, agriculture, like all other cultures, declined and it remained to these latter times for a full appreciation to be arrived at of the importance of leguminous plants and the bacteria which live on their roots.

A knowledge of the soil enriching qualities of all leguminous crop lies at the basis of any system of crop rotation, or of soil improvement. Those farmers who are endeavoring at least expense to build up their farms, make a practice of growing clover or some other leguminous crop as frequently as they possibly can. Sometimes, especially by orchardists, the whole crop is plowed under and the soil thus enriched both in humus and nitrogen, but with clover especially, provided the hay is fed to stock and the manure turned to the land, it is more economical practice to cut the first crop for hay and then to plow under the aftermath. But even even when land is left down to hay for two or three years, or more, it will still be the better for having been seeded in the first instance largely with clover.

DIFFICULTIES ENCOUNTERED IN GROWING LEGUMES—HOW TO—OVERCOME.

Difficulties are often encountered by those who try to grow successful crops of clover. The soil may be too poor or it may be too acid; it may lack lime, or it may be in need of drainage. Oftimes, however, the reason why clover does not grow as luxuriously as it should is because the bacteria which are essential to the development of the nodules and hence to the appropriation of the nitrogen of the air are absent. This deficiency can be supplied by transporting soil from a field in which clover had previously flourished and on the roots of which nodules abounded to the new field. However, this process is not always convenient. Nor is it always necessary.

LOW TIDE AT PUGWASH, NOVA SCOTIA.

Bacteriologists now grow these bacteria in their laboratories and it is possible to send growths of these in small tubes to farmers in any part of the world. At the Agricultural College at Truro, Mr. E. S. Archibald is now growing on artificial food the bacteria from red clover, alfalfa clover, peas, beans, vetches, and he will send cultures of these with full directions as to how they may be used for a nominal payment of 25c. per culture. The method of inoculation is very simple. The applicant will receive a small bottle in which there will be some gelatinous material which provides food for the bacteria which are growing on its surface. The directions are to wash this superficial growth of bacteria off the gelatine by means of a little water and then to sprinkle this water, which will now contain the bacteria, over the seed. The seed is then allowed to dry for an hour or two in a dark place and is then sown in the ordinary way. In this way, each seed carries the bacteria which become attached to it to the soil. Nature does the rest. A fuller account of this process may be found in an article on Nitrocultures written by Mr. E. S. Archibald, which appears in the 1909 Report of the Secretary for Agriculture, Province of Nova Scotia.

DIFFERENT BACTERIA FOR DIFFERENT LEGUMES.

Although, the bacteria which live for example on the roots of red clover appear almost identical with those on the roots of alfalfa clover, or peas, or vetches, or beans, yet it is found that there is a difference. You cannot inoculate alfalfa clover with red clover culture, nor vice versa. A separate culture is required for each leguminous crop. As at first stated, it should be clearly understood that there are no nodules and no bacteria and no appropriation of free nitrogen in connection with oats, or potatoes, or any other plants, except those of the clover or legume family, as described in the foregoing.

RESULTS FROM SOIL INOCULATION.

For three years we have been sending from Nova Scotia Agricultural College cultures of legume bacteria with which to inoculate the various plants of the legume family. The reports to hand indicate that in about 60 per cent. of the cases, the crops have grown decidedly better as a result of this soil inoculation. In the remaining cases, the result of results have shown fair results to no results. A single quotation from a correspondent indicates results which he has achieved by the use of such culture: "Where I used nitro culture on red clover I never had a catch like it before. Where used, some clover came in bloom, and where not used the clover was small, immature and delicate. I believe that nitro culture is what we want in this part of the country; as a rule clover takes poorly." Those who wish to test the matter for themselves can secure the material by applying, as stated above, to Mr. E. S. Archibald, Agricultural College, Truro. In conclusion we may state that, where already the clover o peas etc., which it is thought to inoculate, grow well naturally, there the nodules will be found and no further advantage will accrue from an artificial inoculation, but wherever difficulty has been encountered in getthese plants to grow, unless perchance the soil is too wet or very poor or too acid, it will be well worth while trying soil inoculation.

NON-SYMBOTIC BACTERIA WHICH

PRIMITIVE MODE OF TRANSPORTATION.

ADD NITROGEN TO THE SOIL.

During the past few years there have been isolated from the soil, at least, six different species of bacteria living independent of other plants which are capable of making use of the free nitrogen of the air. It has also been determined that, in some soils, nitrogen has been added to an extent that could not be accounted for except by the activity of this class of organisms. Considerable experimental work has been carried on with a view to making cultures of these organisms similar to the legume bacteria cultures, but while some striking results have been attained, the general results have not been satisfactory. This, it is believed, is largely due to a lack of knowledge of the exact conditions necessary to encourage the growth of these bacteria. We look forward with some confidence to more discoveries along this line and judging from results already achieved, believe we have reason to expect much greater results in the very near future. In the meantime, we have no practical suggestions to offer in regard to the use of this class of organisms and our only excuse for introducing the subject at all is to give some insight into the problems with which soil Bacteriologists are now struggling.

We have thus briefly outlined the facts in regard to bacteria and their function in the soil. To fully explain even what is known would require too much space. But as yet the great field of soil bacteriology is but slightly explored and the facts which are known are only partially understood. Recent investigations, for example, have shown that the sterilizing of certain unfertile soils will decided,y increase their fertility. The explanation of this is yet obscure. It is generally, however, believed that this sterilizing causes the destruction of all classes of bacteria and that these are, by some selective process, replaced by favorable sorts that subsequently get a better opportunity for growth than they had when they struggled for existence side by side with unfavorable sorts. This explanation is somewhat speculative and we would not have introduced it, except that it serves to show some of the difficulties which soil bacteriologists are encountering and, further, serves to indicate what may be expected when a full solution is arrived at. When we consider that the subject of soil bacteriology dates back scarce 30 years, we cannot but wonder that so much has been ascertained. But when we contemplate how much has been achieved through the study of electricity, in a similar period we cannot but believe that a further application to the study of bacteria in relation to the soil will prove fruitful of practical results far beyond anything yet thought of.

We had intended in this article to deal with the subject of bacteria as related to the health of animals and the industry of dairying. But we have exhausted our space. Should this matter prove of interest to the readers of the Maritime Farmer, we will be glad in some future number to present this phase of bacteria in relation to agriculture.

Care and Protection of Farm Machinery.

W. R. D. Owings, Advertising Manager of International Harvester Company of America.

Since the arrival of dollar wheat, seventy-five cent corn and fifty cent oats, editors, college professors and economists have taken a great deal of pleasure in speaking of the present day farmer as a "business man." They do not always define the term and on close scrutiny it looks as if the so-called "business" farmer was sometimes such, largely because high prices of his products had made him prosperous, rather than because of his adoption of more businesslike methods.

It has been well demonstrated that a real business man is successful as a manufacturer in so far as he is able to make mechanical labor take the place of less productive hand labor, and that a real business man as a farmer is similarly successful in so far as he can do the same thing.

But here, very often, is where the resemblance ceases.

The manufacturer invests so much money in labor-saving machinery, he allows so much for depreciation and then proceeds to see that his machine is well housed, well cared for and kept going. He figures that it must pay so much interest on the original investment, plus a profit sufficiently large to equal, ultimately, the original investment. The longer the machine can fulfill the duties for which it was intended, the greater the money returns on the first outlay.

When a farmer figures on the same basis in caring for his equipment,the economic term of "business man" fits him and generally you can call him an automobile owner as well. But when he invests his capital in expensive machines—and many of them— such as modern farm nowadays necessitates, and then leave his plow in the fence corner and his binder in the field and his new wagon under the eaves of his cow shed, he falls short of exercising the right kind of business methods.

Perhaps he makes enough to be able to do all of this without noticing the drain upon his gross income. Some farmers figure that way but it is not good commercial doctrine.

The money which a farmer puts into a binder, mower or manure spreader, is just as much capital invested as the money another man puts into a machine for making shoes or spinning cotton. It deserves an annual interest and an ultimate profit equally as much, and it is entitled to as thorough care and protection. Furthermore, the laws governing continuity of service apply exactly the same to a cream harvester and a wagon as to a planer or grinder. Of course, owing to the seasonal use of farm machines, there are lapses of time when certain machines must remain idle. It is at this period when they should be best protected. Scientists say that the muscles of an arm wither quicker from inactivity than from over-activity. The same thing is true of equipment, whether on the farm or in the factory. More plows have been worn away by the weather than were ever worn away by service.

NEAR MARKET SQUARE, CHARLOTTETOWN, P. E. I.

True as this is, very little attention has been paid to the science of machine care. Experimental stations will work for years to show how to good many acres to pile up enough only thirty bushels grew before. No one questions the usefulness of this work, but it takes the difference of a gaod many acres to pile up enough dollars to buy a new binder. And yet, very little time is spent in showing how to increase the life of a binder from six to fifteen years. Perhaps they leave it to the common sense of the farmer. If they do, all right, for common sense is really the thing that is needed.

College instruction— ancestral advice— and orginal research in the care of farm machines can all be simmered down to these three elementary necessities—good roofs,good paint and good lubricants. These three determine whether the days of a machine shall be long in the land or whether it shall soon return to dust whence it came and another order go to the firm who made it.

Let every farmer attend to this trio. How and when are questions which each must answer for himself not very profound question but very important.

Few people realize how simple and yet how essential such care is and for those who have overlooked this phase of agricultural life, we give the experience of one successful Kentucky farmer which may contain helpful suggestions.

This man ran a big farm in that state and in spite of indifferent help and long used soil, made money. He was a firm believer in the above mentioned triumvirate and he practiced what he believed. Back of his barn he had erected a long low shed, not particularly showy or expensive, but dry, and under this shed he kept everything, in the equipment line—from grindstones to wagons. In one end he built a homemade improvised paint shop. Although his reputation as a family man in that country was good, it is said of him that he would just as soon leave a member of his family outside all winter as his mower or his drill.

Wnen he finished his plowing, he saw to it that his men brought the plow back to the shed. He then went over it thoroughly with a coat of white lead and it was left that way all winter. In the spring a little kerosene or turpentine was applied which loosened the paint so that with the first contact of the ground the share came out smooth and shiny like a mirror.

"That plow," said the Kentuckian, "cost me thirty-five dollars. The paint cost about thirty-five cents, and it made the plow last ten years longer. This is just an illustration" continued he. "of my procedure with every machine I own. Every two years I made it a point to go over all the binders, mowers, and all the other machines I had on the place, with a good metal base paint. I even painted the knives of the cutting machines the same as I did my plow, and I found that with a little application of turpentine or kerosene they became bright and shiny before the first circuit of the field was completed.

I didn't use up all of this paint because I felt more friendly towards the Sherwin-Williams people than I did toward the International Harvester Company. It was merely a matter of economy with me because paint was cheaper than new machines.

"Perhaps also the question of pride helped me a little, because I always liked to have everything about the farm clean and bright. I generally use red because I like that color and becaue red lead is better than white lead for outside work. kept even the tongues and whiffletrees of my wagons as good as new." They are mostly made of locust in that country and, when properly painted, would last a century.

"This painting was not just a hobby; I found that it paid, as at one time I sold a binder which I had used steadily for six years for over two-thirds of what it cost me and I didn't cheat the fellow either. It was practically as good as new.

"I was a paint advocate all right, and it seemed to me that hired men might come and hired men might go, but my wagons, mowers and drills went on forever.

"I was equally as 'cranky' on lubricants. When I first started farming as a young man, it did not take me long to find out that a hot box generally meant a ten mile trip to town for a new part. I had just about three experiences of this kind and after that the most important bit of barn furniture, next to the paint can, was the oil can. Many a time since then, when I have seen my neighbors tied up in the middle of a workday with an overheated part, I have praised 'John, from whom oil blessings flow,' as the University of Chicago boys say. I used to make it a rule, after each long trip, to grease my wagons with the result that they were always ready and always shipshape. I invented patent dust protectors of my own when none came with a machine and where this was not possible I kept the exposed parts well cleaned.

"Now, all of this might seem rather unimportant to some farmers, or they might think it a great deal of trouble for nothing, but, in the long run, I never noticed the trouble and I found that it was a good form of economy. I farmed for many years, at a time when prices were much lower than they are now, and I made my farm pay. I do not claim that it was all due to my caring for my equipment, but the fact that I made every cent of capital invested in the machines return me one hundred cents on the dollar, and then some, had a great deal to do with my prosperity."

Summer Care of the Sheep Flock

Some Traits of a Good Shepard

By Andrew McPherson, Rocklin, Pictou Co. N. S.

Editor Maritime Farmer:—

Before the first April issue of the Maritime Farmer reaches its readers, the lambing period, in a good many cases, will be over for this season; but, there are yet quite a number of farmers, who believe that the latter part of April and the first week in May is the best time to have their lambs come. To those we would offer a few suggestions that may be helpful in this most critical of all periods, in the life of the flock; because now is the time to "make good," for the whole year's work. Every lamb saved and sent to the pasture with the flock means the difference between success and failure, or between profit and loss.

In travelling through the country in the summer season, in localities where nearly all the farmers keep small flocks of sheep, does any of the readers recollect seeing a flock where the lambs outnumbered the rest of the flock? Is it not oftener the case that in flocks of from fifteen to twenty ewes, we are able to count only ten or twelve lambs, and sometimes not that many? Knowing as we do, that every ewe should have at least one lamb and that a great many bear twins, how are we to account for the scarcity of lambs, in count for the scarcity of lambl? In the natural order of things, at least one or two lambs should be skipping by their fleecy dams.

Of all the domestic animals, sheep are the most helpless, and look upon the Shepherd as their protector and friend, and, when trouble comes, as come it will in the best regulated flocks, if the Shepherd is not on hand to give the necessary help, too often, the result is a dead lamb or perhaps two.

As we know the time the increase of our flocks is expected, it is good policy to have everything in readiness. Having the ewes in good condition for this trying time is of the first importance. We have a mortal dread of a skinny ewe, as in most instances she will disown her lamb, even if it is worth while to save it, and very often is not.

"Ewes well wintered are half summered," is an adage that is as true as it is old, and if we commence to feed a little oats and bran about a month or six weeks before lambing time, ewes that have no disease, should be in a condition to bring forth strong, healthy lambs, that will be looking for nourishment a few minutes after being dropped.

We find it good practice to have a few hurdles ready to separate the ewe and lamb from the rest of the flock for a day or two. When we see signs of approaching pertuntion, and the careful Shepherd will see those signs of approaching parturition, and event takes place, then we can pen the ewe by herself and the chances are she will be able to take care of herself; but if not, always be on hand to render help if needed. Nothing shows the Shepherd instinct better than a willingness, during the lambing period, to get out of a warm bed, on a cold night, to see if all is well in the sheep fold.

If everything goes all right there is not much to do but leave them alone. Sometimes a young ewe will be excited and will not allow the lamb to get any nourishment, in which case she has to be held, as the new milk is the best medicine for giving the young lamb his first feed. Once the little thing gets a belly full the trouble is about over.

In every case it is a good plan to shear the wool off the ewe's udder, as it gives the lamb a better chance and also prevents the danger of wool balls forming in the lamb's stomach, which often causes death.

As the new milk is very laxative, we have to watch that obstructions do not form at the root of the lamb's tail, thus preventing the bowels from performing their functions. If the obstruction is not removed it will harden and soon cause death.

White scours is another trouble that causes a great mortality among young lambs. This trouble often occurs when the ewes are fed too rich food, such as ground peas, corn meal, etc. The remedy is to cure the lamb through the mother. Change the feed to bran, turnips or anything that is of a cooling nature. However, if the lambs scour very badly they should be taken off the ewe altogether for a short time and given milk, from a fresh calved cow, slighty diluted and a little powdered chalk added.

Lambs are playful and should be allowed to indulge themselves to the utmost by providing a run or creep where the ewes cannot go. By putting a little ground oats and bran in a clean trough and renewing this every day they will soon be helping themselves and the benefit derived therefrom will be noticeable.

DOCKING AND CASTRATING. — The males should be attended to while the lambs are quite young, at two weeks old is about the right age, if the weather is not too cold. Docking does not affect their growth at all and gives the lambs a more uniform appearance and prevents dirt and filth from adhering, as is quite apt to be the case, when they are first turned out on grass. If the ram lambs are to be kept until late in the summer, castrating should not be neglected as they will fatten better and be less troublesome to the rest of the flock.

As spring advances sheep get restless in the yard and are seeking every opportunity to get out, and, sometimes to get them out of the way, they are turned out too early.

We think it good practice to shear the sheep and gradually get them accustomed to the change before turning them out of the yard. By shearing a few at a time and covering them with old bags or sacking, of any kind, until they get used to going without their warm fleeces, and prevent them from catching cold, by turning them out in a dry pasture, for an hour or two every warm day.

As they will refuse to eat hay in the barn after getting the taste of grass, we are apt to jump at the conclusion that they are getting plenty to eat in the pasture, and foolishly withold all bran feed from them. For this time we like to tempt their appetites by having a load of early cut, well cured clover hay stored away to give them when taken in at night. This in addition to a small feed of whole oats for the ewes and ground oats and wheat bran for the lambs will get them used to summer conditions, without too violent a change from winter feeding to the tender lucious grass that has such a loosening effect on the bowels.

About a fortnight or three weeks after shearing, if the weather is mild enough, the lambs should be dipped. The ticks, by this time, are all on the lambs and a good dipping will generally insure a clean flock. In the fall the whole flock should again undergo a thorough dipping before going into winter quarters. It is astonishing to note the difference in the amount of feed a clean, well dipped flock will require to take them through the winter and that required by a flock over-run with ticks.

After the flock goes to pasture, there is not, or should not be much more trouble except that the Shepherd will have to keep his weather eye open for any unforeseen emergency.

Shade, water and salt should always be accessible and change of pasture, several times during the summer, is advisable. If a dozen furrows are ploughed, on some dry knoll, we will see the sheep gather there several times a day in hot weather, and raise a cloud of dust by stamping with their feet. This is "sheep instinct" and is done to prevent the fly that causes grub in the head, from getting in its work. The question of raising supplimentary fattening feed for shortening the winter feeding.

Fattening lambs, etc., is another story that may be taken up later, if of sufficient interest to Maritime Farmer readers.

IN PASTURES GREEN AND BESIDE THE STILL WATERS.

President Bright's Address at Canadian Clydesdale Breeders' Association

To be able to meet such a splendidly representative gathering of horsemen at the 23rd annual meeting of the Clydesdale Horse Association of Canada is a great pleasure to me. It is a greater pleasure, because, meeting as we do, at a time when other attractions are absent, I know that it is not a horse show that has brought so many brother horsemen from all parts of Canada together but a genuine interest in the welfare of Canada's one greatest horse—the Clydesdale. Such a gathering as this now assembled speaks volumes for the wide appreciation of the present status of the Clydesdale horse of Canada, agriculturally and commercially, and augurs as well still greater things for the future.

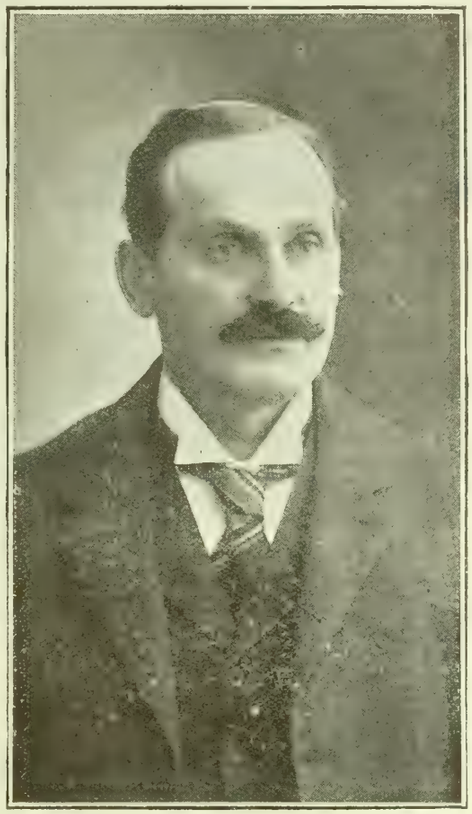
I may say, not boastfully, that the officers and directors of the Clydesdale Horse Association of Canada are proud to meet so many of the members of the Association here today. We are proud of the co-operation, steady and unwavering of the leading horsemen of Ontario, Quebec, the Maritime Provinces and the great broadening provinces of the Canadian West, where the Clydesdale horse holds sway, just as he ever did in old Ontario. We are proud on meeting you to-day, to be able to present to you the best financial report that has ever been presented to an annual meeting of the association, and to report to you, the best year in the history of the Clydesdale horse of Canada, all along the line. There has been a record scored in importation. More horses have been selected and brought to Canada for the improvement of the breed than in any previous year. Not only is this the case but there has been a great and commendable increase in discrimination in the kind of horses imported for this purpose. Never have such a large number of such high-class animals crossed the ocean to Canada before.

Canada has made historical advancement in horse breeding and in prestige abroad as well as at home. At the New York Horse Show, Clydesdales from Canada swept the boards, at Chicago Canadian prestige was upheld as usual. It has become the usual thing for the Canadian Clydesdales to win at Chicago. While Canadian bred Clydesdales were winning admiration and applause on the shores of the Pacific, at the World's Fair at Seattle, away far across the Atlantic, in the old land that magnificient Clydesdale gelding Bobby Burns with his splendid Canadian bred mate were commanding the homage of the best horsemen of the old land, as they toured Great Britain and the Continent in the famous six horse team of Morris and Co. I am glad to see before me the face of our old friend, Alex Doherty, the breeder of this famous Clydesdale.

I would say to you gentlemen, Clydesdale breeders of Canada, that is every Clydesdale you own, you have an asset second to none in the Dominion of Canada. You are able to turn a Clydesdale, be it stallion, gelding or mare, into cash, just as readily as you can turn a bank note into cash.

Surely we have come to a very happy time when we have realized that enviable position. There have been times when we considered Clydesdales to be very valuable assets, but it has sometimes been difficult to find out what its cash value was. Everybody knows to-day what the cash value of a Clydesdale is. It is above par, it is at a premium. It is an asset which more people are looking for, trying to purchase to-day than any other that I know of.

Our Western Friends:—



JOHN BRIGHT.
President Canadian Clydesdale Breeders' Association.

We have with us many horsemen from the Great Canadian West. They are enthusastic Clydesdale men as any of us. At the present time there are many more throughout Ontario and Quebec, looking for just about one thing, and that is Clydesdales. Some of these gentlemen tell me that it is nearly impossible to induce horsemen to part with them, at any reasonable price. I would say to all, do not hold your spare stock too high. Sell them at a fair price, and give the other fellow a chance. We need to encourage the Clydesdale in the West. It is a great country, with a great future, and it will be well to see that the ground work for a great Clydesdale country is laid at the same time.

Another recommendation I would make to whomsoever may be selected to rule the destiny of this great Association is to endeavor to give larger grants to Western Canada for the encouragement there of Clydesdale horses and their progeny. We have increased grant made for this year to the Manitoba Winter Fair. This association can now afford to treat the Western interests more liberally, and it will be money well spent, if it encourages them to go to Scotland, or come to Ontario and select better and better horses each year as the foundation for the breeding stock of the West. While it is a wise policy for any Association to save up some money for a rainy day, what I would like to do is to strain every nerve to keep the Clydesdale business to the front throught all Canada, and to keep it going. I would like to see the Clydesdale Horse Association of Canada doing its full share in inducing the people of the West to buy the right stuff, that will lay the foundation for such a Clydesdale horse for the future as will beat the horse of any other breed that comes up against it first, last and all the time.

Gentlemen, we are all proud of the stand which the Clydesdale has taken in America. We are proud of the grand array of Canadian farmers who rely on him in their business, and of the exhibitors who have carried off the best prizes where ever they have shown their Clydesdales. And I am proud gentlemen, that you have for the third time elected your humble servant as head of this great Association, The Clydesdale Horse Association of Canada.

DONALD INNIS' HOME IN SUMMER TIME.

More about the Bounsing System.

A St. John reader sent the following clipping from the Telegraph, St. John, to which he adds,. Why not give a bounty to the farmers if they are worth $20,000,000 when the fishing industry is only worth $6,000,000 and the lumbering interests $7,000,000? What does our farmer readers say re this matter?

"John F. Calder, of Campbello, inspector of fisheries for St. John and Charlotte counties, arrived in the city yesterday and registered at the Victoria. The news of Mr. Calder's arrival will be received with pleasure by the fishermen here, as he brings with him their fishing bounty checks. To The Telegraph last evening Mr. Calder said that he had seventy-five checks for the fishermen of St. John county and 630 for those of Charlotte county. The checks range all the way from $4.25 to $40. Asked as to what the fishing prospects for the coming season were, Mr. Calder said they never looked brighter. The prices for dried fish, such as hake and pollock, were rising almost daily. The contracts for sardine herring also show that the fishermen will realize better prices in this line than they ever did before. The lobster fishing, Mr. Calder said, was extremely good during all the winter. He attributed this to the fact that the extremely mild weather made it possible for the fishermen to attend to their traps almost as regularly as they do in summer. New traps for lobster fishing are at present being built, the inspector said, which means that they have got a month's start this year over last.

Wilson's Beach at Campobello presents a very busy appearance just at present, Mr. Calder said, as fifteen new gasoline fishing boats have been added to the large fleet of 110 which were previously stationed there.

Mr. Calder says that present indications point to a very heavy tourist traffic at Campbello during the coming summer. Several new cottages are now being built to meet the demands. Mr. Calder will leave for Chance Harbor on Wednesday and from there he will make a tour through Charlotte county."

A Link Between East and West.

A remarkable example of the advantages of making reliable goods is to be found in the demand which comes from the great Canadian West for the pure wool tweeds made by the Hewsons of Nova Scotia. Soimany people have gone West from Eastern homes where the name "Hewson" stands for all that is best in cloth and knitted goods, that the call comes back for the good, strong, comfortable woolens that the boys used to wear "at home."

History of The Clydesdale Horse From their Foundation.

By Prof. D. McEachran, LL. D., F.R.C.V.S,D.V.S., etc.

A legend has it that about 1715 the Duke of Hamilton brought home with him from the Continent of Europe five big black Flemish horses, which he gave to his tenants for the improvement of their stock.

Unfortunately, no records of this have been discovered, and some there be who doubt the accuracy of the legend. However, it may be, we have the knowledge, in support of it, that to his tenants in the upper wards of Lanarkshire are we indebted for the improvement in size and quality of this famous breed, whether we ascribe this to these Flemish importations, or to selection, proper mating and feeding by these men; to them belongs the credit of improving the Clydesdales throughout Scotland.

From Lanarkshire, Clydesdales found their way into Ayrshire, Argyleshire, Dumfrieshire, Kirkcudbrightshire, into the Lothians, Aberdeen and other counties of Scotland. At an early date, the stock-drivers into the North of England were, in times of peace, regularly conducted, and no doubt, Clydesdales were brought south and sold to farmers of the northern shires, Northumberland, Cumberland, Yorkshire and Lincolnshire, where they were mated with the old black cart-mares, which had also been improved by European importations.

This, as stated by the late Sir Walter Gilbey, led to the development of the Shire horse as we know him to-day, a horse of more weight, heavier but rounder bone, a truly magnificent draft horse for heavy work at a slow pace.

As was to be expected, many of the English breeders continued to present day, every spring, the agricultural societies of the English shires compete with the Scotch in premium-giving for the service of Scotland's best horses, with the result of producing as good and as purebred large-sized Clydes as are to be found anywhere. The great majority, however, adhere to the Shire horse, which has long been recognized as a distinctive breed, and registered as such.

THE CLYDESDALE HORSE IN KINTYRE.

In Kintyre, my native land, a fertile peninsula in the sauthwest of Argyleshire, Scotland, till about one hundred years ago, they bred Highland cobs, a short-legged handy little horse, which furnished an admirable loundation for the improvement in size then about to take place. About 1820 Sir Charles Lockhart, of Lee, sent to his highland estate, Largie Kintyre, a large black stallion, of the improved vale of Clyde horses, which proved a most fortunate cross, for to him date back the improvement in size and form of Kintyre horses, which have played an important part in Clyde breeding the world over.

STABLES OF PROF. DUNCAN McEACHRAN MONTREAL.

From then till now many of the most noted sires travelled in Kintyre, such as Farmer's Fancy, (298), Glancer, alias Clyde (153), Rob Roy, (714), in early days, producing such horses as Black Leg, (71), imported to Australia; Ivanhoe, (396); Sir Colin, (772) and many others, and in more recent times, Prince Alfred, Fitz James, Old Times, Florizel, Gay Everard, Garthy Cashier, Lorne etc., travelled there. Many of the prize winners of the present day were bred there.

For a long period, Kintyre was justly celebrated for producing prize-winning Clydes, and to-day as good blood exists there as in any part of Scotland. True, owing to the influence of the late David McGibbon, factor for the Duke of Argyle, several of the Riddell-Drew Clyde-Shire-cross stallions travelled there for a number of years, and many of the best Clyde families there are in the meantime excluded from Canadian registration and imporsation. Notwithstanding this, many mares of purest pedigree are there mated to the best of Clyde sires and many of the prizewinners in Scotland have been bred there, and not a few from my native country have enriched Canadian Clyde breeders. The celebrated Silver Cup served there during the past season, and for the season of 1910 a very promising young horse, High Degree, one of the best of his age in Scotland, has been secured, £100 premium being paid and his terms to be £3 at time of service, and £4 when the mare proves in foal.

SELECT CLYDESDALES.

The early sixties mark an epoch in Clyde breeding in Scotland, when David Riddell and Lawrence Drew visited the northern English shires, and brought back with them some Shire fillies and set about breeding a select Clyde, such as attracted their attention in England, a larger type of horse with more bone and well-haired legs. It is not to be wondered at that this step was strongly resented by the pure bred Clydesdale breeders, when Riddell and Drew, with the produce of this cross, such horses as Prince of Wales, Darnley, Banker, etc., swept the show-rings and outsold them both by private sale and under the hammer.

From this time, two factions existed in Scotland among Clyde breeders, Drew and Riddell working for the large-boned, heavy type, represented by such horses as Prince of Wales, Darnley, Banker, Sir Walter Scott, The General, and a host of others; and another faction working for lighter bone, flatter leg, less hair on the legs, larger feet, longer and more oblique pasterns. At the head of this type is Baron's Pride, by Sir Everard, by Top Gallant, dam Forest Queen, by Spring Hill Darnley, and a long list of his progeny, Baron o' Buchlyvie, Pride of Blacon, etc. Andrew and William Montgomery, the Clydesdale kings of Scotland, as owners of this phenomenal horse, must assume the responsibility of the new type of Clyde.

It must not be supposed that the little, neat type of horse, too long sought after by Canadian breeders and by Canadian importers, which until recently were representative of the show-ring class of Clydes, will continue to be sought after. If we visit the extensive establishments of Andrew Montgomery, at Netherhall, or William, at The Banks, our minds will be disabused of that idea; at both places ponderous animals predominate, and if you want size combined with quality, you can find it there.

If asked what my views are as to the points of variance by these two factions, my answer would be: Combine the two; let the show-ring judges judge by points, and give more value to the general conformation, size, weight, color and action; give up the present exclusive attention to feet, oblique, long pastern; flat, light bone, and clean legs—all of them important; nay, imperatively so—and base their decisions on the essentials of strength, endurance, soundness of body and constitution, prepotency, breeding, action and color—a combination of qualities which give the animals the highest commercial value. Let them carry themselves erect, and in their line of vision take in the whole horse and not his feet and legs only.

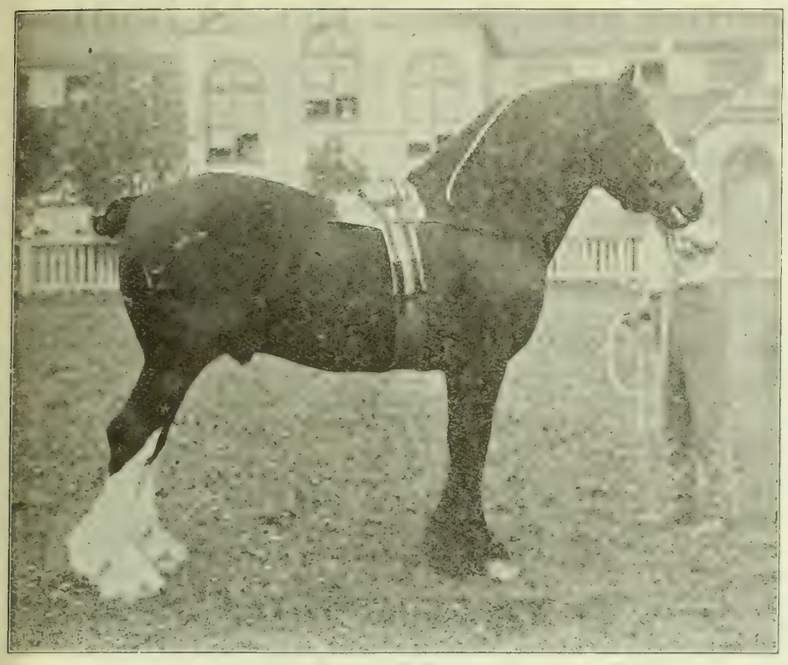
While not agreeing with David Riddell in everything, I am bound to say that he did a great deal for Clydesdale breeding in Scotland, and a great many good ones came to Canada from his stables. For these reasons, I take pleasure in quoting the following extracts from a Glasgow newspaper of November, 1908, being the report of a dinner and presentation of a portrait in oil to him by his numerous Clydesdale-breeder admirers: "Mr. Riddell's services to the breed of Clydesdale horses lie mainly in the fact that he retained the great horses, Prince of Wales and Darnley, in this country, when the demand for such horses for exportation was very strong; so that, had he parted with any of these horses to any foreign buyers, the whole course of Clydesdale history would have been different from what it is. Had he sold Darnley for exportation, for instance, there would have been no Top Gallant, no Sir Everard, no Baron's Pride; and had he sold Prince of Wales to any foreign buyers, there would have been no Prince Roberts and no Hiawathas.

Mr. Riddell was on the right lines of breeding all along. He brought out The General, the sire of Prince of Wales, and he also brought out Sir Walter Scott, the sire of The General, and also Old Clyde, the sire of Sir Walter Scott: and besides, he put through his hands Samson, the sire and dam of both Prince of Wales and Darnley. So that he was well entitled to be called the Grand Old Man of the Clyde breed."

I extract the following remarks from Mr. Riddell's speech at the presentation dinner already referred to as worthy of our consideration.

"One of the most remarkable of his asociates in Clyde breeding was Lawrence Drew. Taken all in all, he was a man of rare gifts, and, above all, a trusty friend and thorough gentleman. When he thought of the type of draft horses which was in fashion when he was a young man, meeting such men as Samuel Clark,

A SPLENDID DRAFT TEAM



ROYAL BARON (4722) (3161)

is a son of Baron's Pride (9122) Vol. XIV. Sire of Royal Baron's Pride, 9470, who was first in his class at the Maritime Horse Show, Amherst. Royal Baron's Pride is owned by Hugh R. McMonagle, Sussex, N. B.

ROYAL BARON'S PRIDE, 9470.

Owned by Hugh R. McMonagle, Sussex.

1st. Dam Doll Gordon	Sire Royal Baron.
2nd Dam Fair Monkbaron	Sire Lawer Baron Gordon.
3rd Dam Nellie	Sire Monkbarns.
4th Dam Kate	Sire Scotland's Glory.
5th Dam Mag	Sire Young Comet.

Peter Crawford, William Park and Robert Findlay, of Spring Hill; and again, when Mr. Drew and he went to Lincolnshire and other parts of England to buy mares and fillies, the change struck him forcibly, and they of the younger generation would perhaps pardon him when he said there was danger of overdoing the fancy points, to the neglect of those which were of the utmost importance for work and durability."

In the North British Agriculturist, 7th October, 1891, is a report of a Clydesdale Symposium, where nearly all the prominent breeders of Clydes in Scotland met at Professor McCall's stock farm. Alexander Galbraith, of Janesville, Wisconsin, said: "Clydesdale breeders are making a fatal mistake in making big feet and long, sloping pasterns the 'be all and end all' of draft breeding."

Professor McCall supported this view. Mr. Galbraith agreed with Professor McCall in saying that very large feet were sometimes a positive source of weakness to a horse.

A good-sized, well-shaped foot, with moderate length of pasterns, were much to be preferred in draft horses to unduly big, wide feet, for the above reason.

THE CLYDESDALE HORSE FROM THE UTILITY STANDPOINT.

I have been asked why I prefer Clydesdales, and selected them as the breed to which I am devoting my time and money. Various circumstances have contributed to that decision. In the first place, probably my acquaintance with the breed since my earliest recollection. It is truly said, "Find a Scotchman where you will, and you will find the Clyde horse." My countrymen are all well known to be frugal in their habits, and they would not long stick to the Clyde horse unless he aided them in their thrift. He does that in a marked degree. The Scotch farmer has to contend against a rugged climate and high rents; he must of necessity work his land so that it returns the maximum possible for his labor and outlay. Lighter horses than Clydes would not enable him so to work his land as to do this. I know of no other breed of horses which can compare with the Clyde for lasting qualities and economy of keep. When carefully bred, an unsound Clyde is a rarity; as a rule, he is sound in his feet, has good bone, well-muscled, is a good feeder, and always ready for his work, and thrives on such food and work as would kill most other breeds. He is to the Scotchman what the old French-Canadian horse was to the habitant.

My professional experiences, extending over nearly half a century, gave me opportunities of seeing and comparing all the known breeds of horses in North America and Europe. I have had for many years the professional charge of most of the large transportation stables in Montreal, where I made careful study as to which breeds were most profitable, considering durability, cost of feed, and freedom from disease, and I have no hesitation in saying that no other breed will meet these requirements as well as the Clyde.

I have been extensively engaged in

(Continued on page 407.)

BEAUTIFUL CAMPBELLTON FROM CROSS POINT, NEW BRUNSWICK.

Seed Selection as Practised in Europe--With Wheat, Oats and Barley.

Prior to 1906 I frequently took occasion at farmers' meeting and elsewhere to state my belief that by continued selection from year to year of the best heads of wheat, oats or barley, from the best and most vigorous plants, the productive capacity and quality of these grains, and also the strength of straw and its rust resistance, could be gradually but materially improved, much to the benefit of the farmer. I have not changed my opinion as to the principle; but, from a study year by year of the results of selection by members of this Association, followed last summer by an opportunity to see the work of experts who have devoted the greater part of a lifetime to a study of plant improvement, I have modified my views as to the extent to which improvement may be made by mass or multiple selection, which is the principle of selection that is embodied in the constitution and instructions issued by this Canadian Seed Growers' Association.

EXCELLENT RESULTS FROM MASS SELECTION.

We can not expect the farmers in the different parts of Canada, who are making a specialty of growing and selecting seed grain, to compile accurate records that could be used to advantage in support of an argument in favor of mass selection. But I have had occasion to visit and inspect the work of many of the prominent seed growers, and, more frequently, to discuss with them the progress they have made. Fully 85 per cent., I should say, of the farmers who have been doing this work know full well that the crops they now have, as the result of several years selection, are more uniform in character and capable of giving larger yields of grain per acre than the crops from unselected seed of the original stock that is commonly available for comparison on adjoining farms. Many of those farmers who commenced with the common kinds and varieties of grain, which had been grown by them or in their district for many years, obtained what might be justly called excellent results as the reward of the first three years of careful selection.

IMPROVEMENT BY SELECTION IS LIMITED.

Since 1906 the observations which I have been able to make and a study of the work that has been done in other countries, have gradually led me to the opinion that the success of our seed growers who are doing the work of mass selection with varieties of wheat, oats and barley which they formerly grew, has depended, to a greater extent than some of us believed, on the care exercised by them when making their first selection. If in making their first selections they picked one or more heads from plants of outstanding merit, then by degrees their process of further selection would be likely to increase those specially desirable plants which they had by their first selection introduced into their breeding plot. If, however, on the first selection they were not so fortunate in collecting heads from outstanding individuals of merit, then their results since that time have afforded them less encouragement.

The system of mass selection now followed with cereal grains by members of the Canadian Seed Growers' Association has, until quite recently, been adhered to by German seed growers. During my visit to them last summer, I took occasion to outline the methods employed by the members of this Association to different men whom I met and who were engaged in the work of plant improvement. They all seemed to be thoroughly familiar with the plan and the principle it embodies and several whom I met are continuing with that plan in modified form. Nearly all of them have been influenced by, and are now adopting or incorporating into their methods, the principle that has been so effect-

A TYPICAL ANGUS BULL.

A WELL EQUIPPED MAPLE SUGAR MAKING CAMP.

ively applied in the improvement of crops by Prof. Hjalmar Nilsson at Svalof, in Sweden, whose methods of work I desire to present in this paper. I will read directly from transcribed notes I made at Svalof while in conversation with Prof. Nilsson.

SVALOF (SWEDEN) EXPERIMENT STATION.

Svalof is situated an hour and a quarter by train north of Malmo. The principal experiment station in Sweden, which is under the direction of Prof. H. Nilsson, is located at Svalof. The institution is a private one but is supported by the government of Sweden, the agricultural societies, subscriptions of members and some slight revenue as follows:—

Swedish Government, ...Kr.	40,000	$10,000
Agricultural societies, ...	20,000	5,000
Swedish Seed Company	10,000	2,500
Members subscriptions	5,000	1,250
Revenues	5,000	1,250
Total	80,000	$20,000

Cost of scientific building, Kr. 300,000.

1 kroner equal 27 cents.

The scientific staff is composed of Prof. Nilsson, five specialists and their assistants and laborers. The scientific grounds include about 30 acres (15 hectares), but the staff makes use of any area required by them to grow isolated plots on the grounds of the General Swedish Seed Company, which comprise about 5,000 acres, 1,200 acres of which immediately surround the scientific grounds.

The organization of the scientific staff at present is as follows as to their work:—

1. Specialist for barley, peas and vetches.
2. Specialist for wheat and oats.
3. Specialist for grasses and clovers.
4. Specialist for potatoes.
5. Specialist for rye.

Provision is made for enlarging the staff to include ten specialists, each of whom will give all his attention to the improvement of one particular crop.

In addition to the station at Svalof, where the principal work is done, stations for test plots and further scientific work are maintained at 5 degrees north (near Stockholm) and another ten degrees north, which is at the northern part of Sweden These sub-stations are in charge of assistants to the members of the principal staff at Svalof, who visit them frequently for the purpose of working out the best selections of the various crops for the districts represented by the stations.

RESULTS OF MASS SELECTION AT SVALOF.

Prof. Nilsson, as a trained botanist, worked as a specialist for several years under the direction of his predecessor. His work from 1888 for six years was based on the advantages of selection alone, so called "mass selection." Large heads were picked by hand and by the use of an automatic appliance; the heaviest were set aside and used as improved seed. From these, only perfect kernels, showing good quality were taken, the object of the selection being to secure stronger straw, earlier maturity, greater immunity from rust, as well as increased yield.

Observation taught him that plants having not more than three stools ripened more uniformly. These therefore were selected, care being taken to keep the plants uniform in characteristics. Only the primary head was selected and of these, only those of heaviest weight per machine test were set aside for improved increase.

After six years he found that, as compared with the original non-selected and impure stock, he had increased the yield, due, he states, to the elimination of undesirable forms of weakling plants; but very little, if any, increase in yield was secured after the first two or three years.

As to the main characteristics of the plant, including strength of straw, immunity from rust, improvement in quality of grain (except because of the undesirable mixtures), and earlier maturity, no improvement whatever had been made as compared with crops from the original stocks.

Collateral tests were made with Chevalier barley, by using only the heavier seed from the centre of the ear or spike.

His unalterable conclusion, drawn from an immense amount of careful work in this plan of selection, was and is that the plant cannot be forced in a way, to alter its main characteristics by the adoption of any practices at present known. This was disappointing to the Svalof staff especially because the farmers of Sweden had been promised by Prof. Nilsson's predecessor that, as a result of their financial support, he would in a few years be able to provide them with varieties of grain far superior to the common sorts then generally grown and especially with what was most needed, varieties of grain with stronger straw and this was to be secured by selection alone.

SELECTION BASED ON INDIVIDUAL PLANT.

In 1890 and 1891 he had selected in the open fields in different parts of Sweden 1,000 or more individual barley plants of seeming merit. He sorted them into three groups according to apparent type and dibbled the seed into plots. The resultant crop from each type proved to be a motley collection of individual plants, markedly not uniform in many important characteristics, as maturity, stooling strength of straw and rust.

In 1892 Prof. Nilsson commenced to base his improvement on the individual plant of outstanding merit, considering a combination of desirable characteristics.

The principal work, the most difficult task, is to locate and separate out the best individual. Prof. Nilsson and his staff spent much time in patiently searching in the common grain crops throughout Sweden for individual plants of superior qualities. These he calls "mutants", or sports that will increase true to type, mostly, he thinks, due to natural cross-fertilization, which occurs in nature but rarely. He has found such sports, the type of which were not fixed but would continue sporting in a manner quite similar to the product of artificial crosses, and under conditions of growth whereby the plant so located as a sport must surely have been produced by natural cross-fertilization. To a trained specialist, who devotes his entire attention to the study of one, or at most, three kinds of crops and their improvement, the occurrence of mutants in ordinary field crops is quickly observed. They occur in relatively large numbers, but exceedingly few of them are worth transferring to trial plots for comparison and further study. These trial plots lead up to discarding thousands of the individual "mutants" that were selected and retaining but an occasional one. The cereal crops of the south of Sweden are largely traceable to these mutant individual plants that were discovered, isolated and increased by Prof. Nilsson and his efficient staff.

Prof. Nilsson frankly states that although he has also faithfully followed the work of artificial cross-fertilization since 1904, the product of his labors in that work has thus far been small and the outlook not hopeful when compared with the method of searching for and making use of those individuals that already exist in their excellence and have to some extent proved their superiority on the soil and climate where they are needed. He is, however, by no means discouraged with his work of crossing artificially. That will be continued by him and his staff as a work of secondary, though of much importance, a work worth doing well on the chance of constructing in one individual, characteristics and qualities not found in available "mutants."

The mutants discovered as the result of persistent search, as well as the individual plants that result

(Concluded on page 404.)

Barred P. Rocks

Our claim to be the foremost breeders of this variety in Eastern Canada has been established by ten years of the keenest competition in the show ring with this class of birds. Our latest triumph at the Amherst Fair, winning, for the second time, the trophy for the best cock, hen, cockerel and pullet, of any variety, and the specials for the best shaped and the best colored bird of this kind, seals the fact. First cockerel, first pullet, first hen and second cock at Amherst means quality now. First cockerel, first hen, first pen and second cock at Halifax, all in one year, endorses it. Stock and eggs for sale. Satisfied patrons our aim.

CRAIG BROS., = Amherst, N. S.

We Want Beef and We Will Have Beef

STEADING OF SAMUEL FREEMAN, AMHERST, N.S.

Editor Maritime Farmer:—

From time to time,you give considerable space to the breeding, raising, feeding, housing and care of the dairy cow, and many valuable ideas are expressed on the best methods of producing and preparing the dairy products for market.

May your good work along this line continue, until the average yield more, and larger dairies are profitabmore and larger dairies are profitably supplying our markets with choice products of the dairy. But we must have beef, and we will have beef.

The people of these Provinces want good beef. Can the farmers meet the demand of our home market, without the aid so kindly given them by the Ontario stockmen, and the Chicago packer?

We hear much about the "cost of living" in towns. If the producer of beef count the cost of his finished product, on the business principal we are told to use in connection with our farm work, viz., a moderate profit, above interest on capital invested, a reasonable amount allowed for depreciation of equipment, barns, fences, etc., actual cost of feed, and a fair remuneration for time employed, not necessarily to be compared with the cost of the plumber, the painter, the paper hanger, or the time of other vocations, of the residents of the towns, he need not have any pangs of conscience, at asking even all the so called, present high price of meat will permit for his output.

If there is a large profit, to be easily derived from making beef there are opportunities, for many residents of the towns to avail themselves of the advantages of the ease, country life affords, and so enjoy the continual picnic, and short work hours their utopian visions furnish of farm life.

Many sections of these Provinces by the sea, are certainly capable of producing a considerable quantity of good beef for our markets, without in any way interfering with the out put of the dairy.

By the use of pure bred sires of beef breeds, and the cows at present kept on many farms, young stock would be produced, that with a bit of care would make, at from two to three years old, beef animals of good type and quality.

Much has been said about the rearing of the dairy heifer in your paper. What would apply to the health and growth of the dairy animal might be applied to the one intended for beef, adding that the one intended for beef at early maturity, should always be kept in as good condition as circumstances will permit.

During the busy season of haying and harvest it is easy to neglect the calf that up to that time has been fairly well cared for. A tablespoonfull of well steeped flaxseed or of linseed meal can be added to the calf's ration with profit, when the whole milk is gradually changed for skimmed milk, which quantity may be modertely increased as the calf grows older.

A few round oats fed during the first winter, gives a calf a thriftiness that will remain with it for a long time.

Of course it is understood that good hay and a liberal amount of roots are the chief ration during the first winter.

The producer must keep in mind that the young beef animal should be kept healthy and growing and that the feed used should be, as far as possible, raised by the feeder.

The study of the farmer should be, to turn as much as possible of his rougher products to the best advantage. ffi

The ration fed should be controlled largely by what there is to feed, at least expense and most profit. Where much grain is raised, more good oat or pea straw may be used, but here at the head of the Bay of Fundy, hay is our most plentiful article of fodder. Turnips are our cheapest and best food to go with the hay.

There is a direct connection be-

(Continued on page 406.)

WHO SAID BEEF?

What is Good Seed?

In these days of progressive agriculture when the individual and the State are combining forces in an endeavor to place this great basic industry, on a higher plane, we hear much of fundamentals. Leaders in any line of reform, social, commercial or agricultural are only fitted to be leaders when they show a capacity to get down to the foundation of things. To properly comprehend the fruits of any system we must get at the roots. To build safely and to best advantage we must have a good foundation.

In plant life everything begins with the seed. The seed, however, is neither the father nor the mother of the plant it produces. It is the plant itself in miniature. Under proper conditions this embryonic plant will sprout and grow to maturity bearing male and female organs in the flowers of the head. Here fertilization takes place and seed is again formed.

There are many factors which influence crop production but until comparatively recent years the seed has not received credit for being of more than nominal importance. Good seed was taken to mean seed which was large and plump and would grow. It never seemed to occur to any one that the sort of plant from which a seed comes has a great deal to do in determining the sort of plant that seed will produce. The principle that 'like tends to produce like', while recognized in the animal kingdom, was scarcely ever associated with the plant-world and yet we now find that principle to be the corner-stone upon which the plant improver builds his hopes for better things.

The most simple and common form of seed selection practiced at present is known as "the fanning-mill selection." This machine simply separates the large and heavy seeds from the light and small and removes weed seeds and useless impurities. This is a very excellent work and should always be practiced as a necessary compliment to the hand selection of seed from standing plants.

It would be quite as unreasonable to expect to get a good horse mereby weighing him and taking into consideration his general appearance without a knowledge of his ancestry or of his own individual vigor, quality and constitution as to expect crops which will mature evenly and give a large yield of high quality merely by using seed which has been separated out of a heterogeneous mass on account of size and weight alone. Good seed therefore, means more than seed which simply appears good. It means seed which has come from a strain of plants noted for its superior vigor, productiveness and general quality. This suggests at once the necessity of adopting some plan of securing seed whereby the plant itself may be considered. Such a plan constitutes the basis on which the the work of the Canadian Seed Growers' Association is founded.

This Association seeks to aid farmers in carrying out this plan on their own farms and has devised a simple system which is within the reach of every farmer. This system is now pretty well understood but for the sake of those who have not seriously considered the matter heretofore we submit it again in brief as follows:—

The grower first decides upon the variety which is likely to do best on his farm. This is done by testing two or three leading varieties in plots under similar conditions for the first year. The next step is to prepare a special area of land of about one-quarter acre in size and to sow thereon a good clean sample of seed of the chosen variety. When the crop on this plot becomes thoroughly ripe the grower goes through the plot with a basket or sack, picking here a head and there a head, his choice being based upon the vigor and general type, first of the mother plant and secondly of the head which it bears. Enough seed is secured by the selection of these specially desirable heads each year to give a sufficient quantity of seed to sow another plot the following year, while the remainder of the plot is harvested in the usual way and the seed used for the main crop.

The above system of selection is what is known as 'mass' or 'bulk' selection, that is, the selection is made up of seed taken from a great variety of strong, healthy, productive plants and results in raising the average of the crop to a higher plane.

Were a farmer in a position to propagate separately seed from each of a number of specially desirable plants and by a process of elimination and isolation to first discover which is the best and then to propagate the seed from this best plant, he might reach the desired goal more quickly. Such a process, however, involves more work, care and patience than the average farmer can find time to give so it is not generally recommended for use in the improvement of the smaller grain crops although it is the system generally practiced by the Association in connection with the improvement of potatoes and corn.

The improvement which has been effected thus far by farmers operating under the direction of the Association has taken the form of increased yields, better quality, greater uniformity and purity, greater vigor and greater ability to resist disease. Though it may be necessary to continue the selection from year to year, in order to maintain the standard, yet such seems to be justified by the results accruing therefrom.

The opportunities to get something better than we now have are inviting. Every farmer has it within his power to develop better varieties and strains than he is now growing. As a matter of fact, the work can be done to best advantage on the farms where the seed is to be grown. Our Experimental Stations are doing excellent work in testing large numbers of different varieties and in improving some of the best of these, but it remains with the farmer himself to help this seed to adapt itself to best advantage in the place where it is to be grown.

Plant improvement can be made quite as interesting as animal improvement and is much quicker and cheaper. It costs practically nothing to conduct plant breeding work while animal breeding requires considerable capital.

This is the time of year when the prospective plant breeder will be laying his plans. The new beginner will want to know where he can get seed of good breeding to begin on and may also desire further information as to the exact steps to take in conducting the necessary operations. We invite all such to communicate freely with us as we are here to help the individual farmer in his efforts to grow "larger crops of better quality." Address Secretary, Canadian Seed Growers' Association, Canadian Building, Ottawa, and receive full directions.

Steady as a Rock.

The Square Gear

MAGNET CREAM SEPARATOR

Skims perfectly, sitting on the ground or floor.

The double supported bowl cannot wobble.

At our expense you can study MAGNET construction in your own Dairy.

You will find its frame strong and rigid.

It is run by square gears and you know that all good machines are built that way.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT
STEADY AS A ROCK

Its steel bowl is supported at both ends (MAGNET Patent.)

All other separator bowls have only one end steadied.

The skimmer in one piece, (easily cleaned) takes out all the butter fat and also separates the slime and foreign matter.

The MAGNET Cream Separator delivers good thick cream every day.

The MAGNET Brake circles the bowl, stops it in eight seconds, preventing wear and saves time.

The MAGNET owner can increase the capacity when he gets more cows for a few dollars, by changing bowl and skimmer only.

No matter what cream separator a man experiments with or buys, he will finally settle down to the MAGNET and when he does his separator troubles are at an end.

Why not buy a MAGNET at first and avoid trouble?

The MAGNET is fifty years away from the scrap heap.

The Petrie Manufacturing Co., Limited,

Head Office and Factory—**HAMILTON, Ontario, Can.**

Branches—Winnipeg, St. John, N. B., Regina, Hamilton, Vancouver, Calgary, Montreal.

AUCTION SALE

An important sale of Pure Bred Clydesdales Mares and Fillies and Shorthorn Cows will be held at the Provincial Farm, Charlottetown, P. E. Island, on Friday, April 29th, 1910. Sale begins at 1 p. m. sharp.

Several prominent breeders will consign to this sale, stock consisting of high class Clydesdales Mares, imported and Island bred and driving horses; also several young Ayrshire bulls and heifers and a few young Shorthorn bulls. Some good grade Milch cows and beef cattle will probably be offered in addition to the above.

Further particulars upon application to the undersigned.

John Richards, Commissioner of Agriculture.

Charlottetown, - - P. E. I.

Cobequid Farm Holsteins For Sale.

Two bulls fit for service from record of merit dams. Three heifers two heifers two years old, and two heifers one year old, bred to Hellon Dekol's Prince. Three young cows, bred to Sir Rooker Posch Artis. Several bull calves from three to six months old. Come and see them.

SAMUEL DICKIE - - - Central Onslow, N. S.

The Maritime Horse Show,

Amherst, Nova Scotia.

The first Horse Show ever attempted by the management of The Maritime Stock Breeders' Association was held in the Winter Fair Building, Amherst, N. S., on the 6th and 7th inst. With no funds in sight, with the exception of a very small sum contributed as special prizes and having to depend wholly for financial support on entry fees and gate receipts, it was, indeed, a brave undertaking on the part of the management to go ahead and offer such a large prize list as they held up for competition in the respective classes.

That the horsemen of the Maritime Provinces were in accord with the movement,, was plainly seen by the large number of entries in the various sections and the very small percentage of those who had entered their horses who were absent.

The weather man smiled favorably on the project and assisted by handing out a batch of what might be called "made-to-order weather."

The citizens of Amherst and horse lovers from all parts of the Maritime Provinces were there, and on every occasion, when horses were being judged the long rows of seats that lined the sides of the track and the reserved seat section at the end of the building were taxed to their utmost capacity.

It is needless to say that President Campbell, and Manager Fuller and the various members of the Directorate wore the smile that will not come off" when they saw how well the show was patronized by exhibitors and general public.

In order to keep up the interest in the judging until the very close of each period, the management, very ingeniously alterated sections of the heavy and light classes and always reserved the best until the last. So keen was the interest manifested, by each and everybody, that there was hardly a seat vacated until the close of the periods.

Prize ribbons, red, blue and white were attached by the judge to the first, second and third prize horses respectively.

Mr. E. C. H. Tisdale, of Beaverton, Ontario, placed the awards in the heavy classes and Mr. A. H. Pearson, Montreal, passed judgment on the light classes.

A full list of the prize winners and their owners is given in this issue.

Clydes, Standard Breds and Roadsters were by far the heaviest classes. There were also some very nice showings made in the carriage class.

Thoroughbreds and Shires had each two representatives.

There was only one pony, which was shown by Miss Della Horton, Amherst.

Hachneys and Percherons were few in numbers but each class contained some excellent individuals.

The Heavy Draught, Agricultural and General Purpose Classes were well filled, Clyde breeding predominating.

The largest number of entries was in the section for Roadsters, in harness, where over twenty horses and carriages were paraded before the judge. The first honor in this class went to Lady Sim, a beautifu, little mare, owned and driven by Mrs. Fred Blenkhorn, Maccan, N. S. We understand Judge Pearson is negotiating for the purchase of Lady Sim. There were many large, strong and shapely horses shown in this class.

The showing in the Clyde and Standard Bred Stallion Classes was magnificent. The cream of the Maritime Province equine family was there.

When one considers the improvement that has been made in the respective classes in the fat stock lines shown at the Winter Fair, in recent years over that shown at the time of the inception of the fair, one is liable to ask the question, will a proportionate improvement take place in as many years in the horse classes? The horse show began by showing a lot of good quality horses some of which were as good as one can find in their class. There will be a general improvement and a more general interest all along the line.

Undoubtedly there are many details that the management encountered in their initial attempt this year that they will be better able to cope with in succeeding years. For the present we know our readers will join with us in congratulating the officers of the Maritime Stock Breeders' Association for the successful culmination of the First Maritime Horse Show.

CLASS I.—THOROUGHBREDS.

Sec. 1.—Stallion foaled previous to Jan. 1st, 1907. 1, "Waterlight," Geo. W. Fowler, Sussex, N. B.; 2, "Herbert," Geo. W. Fowler, Sussex, N. B.

Sec. 6.—Stallion, any age, Diploma "Waterlight," Geo. W. Fowler.

CLASS II.—STANDARD BREDS.

Sec. 1.—Stallion, foaled previous to Jan. 1, 1907. 1, "King Dodds," Dodd Dwyer, Pictou, N. S.; 2, "Oakley Baron," W. S. McKie, Charlottetown; 3, "Maritime Prince," Thos. Munro, New Glasgow.

Sec. 2.—Stallion, foaled during the year 1907, 1, "Oakley," H. S. Bell, Moncton.

Sec. 3.—Stallion, foaled on or after Jan. 1, 1908, 1, Baron Wood, R.

(Continued on page 401.)

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINARY REMEDY

Always Reliable. Sure In Results.

None genuine without the signature of The Lawrence-Williams Co.

Sole Importers & Proprietors for the U.S. & CANADAS. CLEVELAND.

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULTS CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

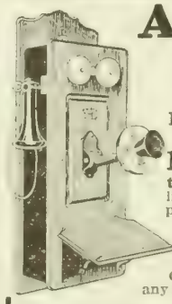
Canadians Appreciate Caustic Balsam.

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

TORONTO, ONT. CLEVELAND, OHIO.



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Poles, Wire, Brackets, Insulators, Tools, Lightning Arresters, Ground Rods, Batteries, Insulated Wire, and everything necessary.

NO CHARGE for our experts' letters of advice, drawings, explanations, instructions, telling you in any language, non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

We are the largest, exclusive and the only bona-fide Independent Telephone and Switchboard makers in Canada or Great Britain.

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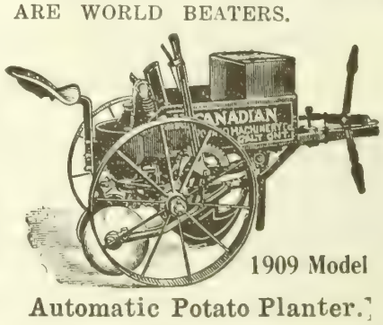
THEY ARE WORLD BEATERS. WRITE FOR CATALOGUE.

Seed Cutter.

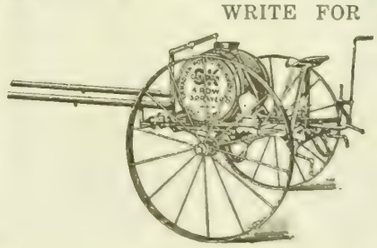
Operated with the foot.
Both hands free to handle seed.



1909 Model

Automatic Potato Planter.

With or without fertilizer attachment.
Has all the essential qualifications to plant potatoes correctly.
Does not puncture or bruise the seed.



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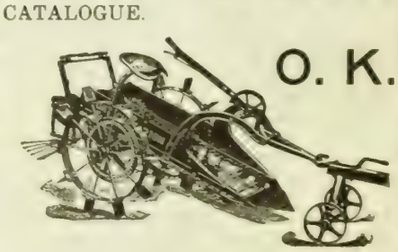
Four Row Sprayer.

Sprays four rows with Bordeaux while you drive.

O. K.



Two Horse Elevated Potato Digger.

Puts them on top where you want them with two horses.

Canadian Potato Machinery Co., Ltd., Galt, Ont. The only manufacturers in Canada of a complete line of successful Potato Machine

A Scotchman's Experiences in Claiming a Farm Home From New Brunswick Wilds

Master of the Situation in Thirty-Odd Years.

Donald Innis,
Tobique River, N. B.

Editor Maritime Farmer:—

In compliance with your request I am sending you the following synopsis of my experience as an emmigrant to New Brunswick. You wished me to relate my early life in Scotland. I do not think that an account of my early life would be of any interest to your readers. There is, however, one motive that prompts me to write this letter, and it is this: I understand there are number of immigrants coming from Scotland to settle in New Brunswick and should this letter fall into their hands it may be the means of giving them some encouragement as it is the experience of one of their own countrymen who trod the thorny path of emmigration to New Brunswick when conditions were not as favorable as they are to-day and who made a success of his calling on the farm.

I began to earn my own living at ten years of age by hiring to take care of a few cows for a small farmer for the summer. I went to school during the following winter and that was the last of my public school education, because I was at that time, like many more boys of my age, blind to the needs of better education, a fact which I did not realize until years afterwards when I had to face the problems of life and found how badly I was handicapped by not paying more attention to school matters in my earlier days.

For the next ten years I worked on farms in various partl of Scotland, sometimes taking care of cattle and sometimes looking after a flock of sheep.

When thirteen years of age I took care of a flock of 200 breeding ewes and ever since I have had a fancy for sheep breeding.

When twenty-one years of age, I came in contact with some horticulturists who persuaded me to learn the business. I engaged with a large establishment belonging to the Earl of Sefiend, where twelve gardeners were constantly employed in the vineries, greenhouses and conservatories, which covered an area of four acres and which were all under glass.

About this time I was thinking seriously about taling to myself a wife and I consider that the consummation of this thought was the means of making me what I am today.

After seven years experience in the gardens of Cullenhouse, the head gardener got a request from a wealthy lady asking him to recommend a married man who would take care of her garden and act as coachman, and he asked me to accept the position. I accepted the offer, got a good situation, a good salary, a good house in which to live and we began to save a little of our income. After spending five years with this lady, whose family was now growing up and who for the sake of affording her children better educational facilities resolved to remove to the city of Edinburg. This resolve on their part necessitated a change for us, and we began to think of emmigrating to America. We first thought of going to the State of Kansas but while thinking over this matter a pamphlet prepared by the New Brunswick Government, giving great and glowing accounts of the country and good inducements for settlers, fell into our hands. Of course, we did not take all that the pamphlet contained for granted as it was a little too glowing. We thought the conditions over, however, and then we corresponded with the agent who was appointed by the New Brunswick Government to look after matters pertaining to prospective emmigrants, to that country.

Mr. Innis' Cosy Home, where the Stranger is ever Welcome.

The inducements offered were as follows: Every married man with two or more children was to receive a free grant of two hundred acres of land on which a log house would be built and ready to live in when the family arrived. We made up our minds to go to New Brunswick and be our own proprietors. We thought the ownership of two hundred acres of land would see the end of all our troubles. I may say that for five years previous to this I was practically my own master, so far as work was concerned and I did not relish the idea of serving another master, so to make a long story short I contracted with the agent to come to New Brunswick, but he, like most of the agents at that time, lived in one of the large cities and we could get very little information from him.

We had to pay two full fares and five half fares for our passage. If I remember rightly a full fare cost $36.00, which would bring the total fare money up to $162.00. We also paid $40.00 for a stove to be put in our log cabin before we arrived—more about the stove later.

We held a public sale of what little stuff we had and which was well attended by our neighbors who bought our things for as much as they were worth.

Bidding farewell to the scenes of our childhood we commenced a journey which was more trying than we at first anticipated. The care of six young children in crossing the Atlantic is a strain on parents, and especially on the mothers, that is not realized by those who have never undertaken such an experience.

Mrs. Innes was born in Morayshire. I was born and brought up in Cullen, a town in Banffshire, which we left and went to Glasgow where we spent a week with some relatives in sight-seeing. From Glasgow we went to Greenoch, where we boarded the Anchor Line steamer Sidonian, which was chartered by the New Brunswick Government. The Sidonian was not a passenger boat; she was simply a freight boat fitted up with temporary berths between and under decks. Just think of twelve or fifteen families all in one compartment in the hold of a ship for fourteen days, during part of that time the hatches of which were locked. Compare that with the steamers now on the Atlantic. There was a great deal of sea-sickness among the children and some of the older people. We experienced some very rough days on the sea and the weather was very cold while we were in the region of the Newfoundland banks, where we passed some icebergs that presented novel sights to us. The word got going one morning that we would see land about eight o'clock and I can tell you there was some rejoicing and straining of eyes by those who had a lot of children to look after. I think the women especially longed to see land again as they felt the responsibility more than the men. We arrived in Halifax Harbor where the Sidonian called to discharge some cargo, about ten o'clock a. m. We were told that she ,would not leave for St. John till noon:next day, so nearly all the passengers went ashore. It was a relief to get our feet on solid ground again. We had plenty to eat during the voyage but it was not very well prepared and neither tempting nor appetizing for sick persons. Mostly all of us had something good to eat that was prepared for us before we left Scotland.

When about thirty miles from Halifax we took a pilot aboard and all the passengers felt that everything was all right. In Halifax we took our children up town where we went in search of a place where we could get some milk for them. We found all the milk we wanted but now our trouble began about money matters. We had pounds, shillings and pence, and to get this changed to dollars and cents was a big problem, which we got accustomed to after a short time. We left Halifax next day sooner than we expected, and some of the men belonging to our party came pretty nearly being left behind. They had gone quite a distance into the country thinking that the steamer would not sail until noon. The Captain did not purpose waiting for them and was bound to sail and let them come to St. John by train. However, the steamer's whistles were blown long and loud and the men recognizing what was up hastened back

A Harvest Scene on the Innis Farm where the best Seed Grain is Grown.

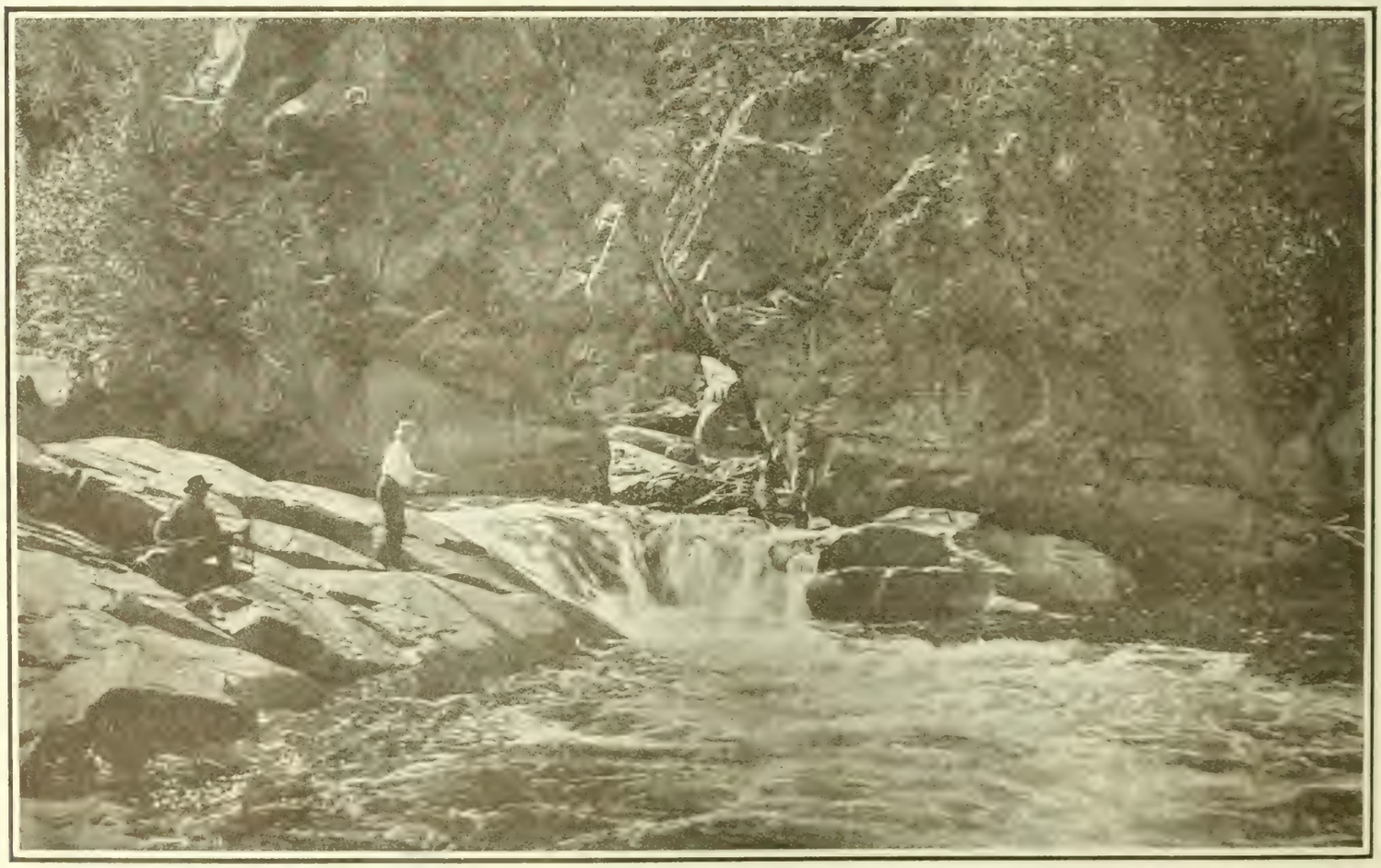
The Steele Briggs Trophy.
For the best exhibit of Seed Grain at the Maritime Winter Fair. Won in 1907,1908 and 1909 by Mr. Donald Innis, who having won it three times becomes its sole possessor.

and got to the wharf just as the deck hands were casting off the ropes and all were happy once more.

I do not know how the passengers found out that the route from Halifax to St. John was a very dangerous one and many of us felt a little nervous over it. We arrived in St. John early next morning and everybody seemed glad that our sea voyage was over.

While in St. John I was offered a good situation by the manager of the St. John branch of the Bank of British North America, to take care of his garden and greenhouse. I consulted my wife about the matter and she said as we had come to make a home for ourselves and our family it would be better to go and see what we could do on the land, so that settled it. We transferred our luggage from the steamer to the train and started for Kintore, the settlement where we were to locate. We got to McAdam Junction about noon where we were to get our dinners. Some of us succeeded in getting something to eat but others did not as the train was due to start while the last of the crowd were eating. The only remedy was to grasp what you could get your hands on and run, some with hard boiled eggs and some with a piece of pie. In passing through such a desolate country as we observed in the vicinity of McAdam Junction, where nothing but rocks could be seen, our hopes began to fail. The prospects were not at all bright to the eyes of those of our party who had come to New Brunswick with the intention of farming. When we left Scotland about the last of April the crops were from four to six inches high; it was now the middle of May and no vegetation could be seen. The country between McAdam Junction and Woodstock, did not look good to us. The trainmen had to stop the train every once in a while and throw water on the heated axles. When we arrived in Woodstock the country began to look better. Here again our luggage had to be transferred from the train to the river boat, which was to take us to Andover as the railroad at that time did not extend beyond Woodstock and was rather disappointing to us as we thought when we left the steamer at St. John our transportation by water was all over. The reader can imagine a crowd of seventy-five to one hundred adults and children crowded on a small boat all night with no place to lie on only the deck. There was not much comfort for those who had a young family to look after. Well, we got to Andover at last and left the boat, or rather the boat left us where the town of Perth now stands. There was no Perth then. When we arrived there, there were teams waiting to take us to our homes in the woods. My family and I were among the first to be sent away on a four-horse team. Oh, what roads, in comparison to the roads we had been accustomed to. My family and our luggage was a load for the four horses and it was the wildest and roughest ride we ever had in our lives. We went up along the Tobique River for six miles and then turned off into the woods on a road that was hardly grubbed out. Our farm was the first on the road and finally we arrived at the home we had come so far to occupy. It looked well to us after the hardships of the previous three weeks. We got our things into the log house and prepared to make things as comfortable as possible. We had all our own bedding which we spread on the floor and were preparing to get the children to lie down when another team came along and the teamster said his horses could not go further, so we had to entertain company for the first time in our new home and they were welcome. After the teamster went away we all lay down on the floor and had the finest rest and sleep that we had had for a month. It was Saturday night and after the children were asleep we older ones talked about the wild beasts we had heard about, until we fell asleep.

Mr. Innis' Exhibit at the St. John Exhibition in 1906.



FISHING AT DAM CAMP WHERE THE DISCIPLE OF IZAAK WALTON FINDS A FINNY PARADISE.

On Sunday morning, a little after daylight, something knocked on the roof of the house. Well, you should have seen we older ones jump to our feet and consult what it could be that made the noise. We dared not open the door for a while and bye and bye the same knocking came again. As it was now daylight, I thought I would take a peep out to see what made the knocking sound on the roof of the house. I thought it might be some bird but the others said a bird could not make a noise like that and I should be more careful. I looked around and could not see anything alarming. But just while I was looking what should come along but a woodpecker that pounced on the roof of the house and solved the mystery. We then directed our thoughts to getting some breakfast. The children, after a good night's rest were all eager to run around. Both families had a supply of food. If I remember rightly the two families numbered fourteen, so it was quite a contract to get breakfast for so large a crowd. The stove I mentioned before was to be set up in the house but we found it lying outside, and we decided to set it up. None of us had ever seen stove before and, do our best, we could not put it together, so we built a fire outside. Where were we to get water to make some tea was the next question? I could see by the lay of the land that there must be a brook down in the hollow, but who would go after it and not get lost? Finally we arranged by placing several members of our party at various distances apart within sight of each other and thus forming a guide-line back to the cabin I went forward and found the brook. There was lots of snow and ice along the banks of the brook on the 16th of May and the prospects for farming were indeed rather blue. The same day a native came along and put up our stove for us.

While eating our breakfast we heard bells ringing and we thought we were not so far from society and that we were hearing church bells. That afternoon we found that it was cow bells we had heard. All this seems silly now and we often have to laugh over it but it was real then.

Well, we went to work to get in some crop. The Government chopped down four acres of the woods so we commenced to clean up a little to put in some potatoes, that never amounted to anything as the frost destroyed them. This was very disappointing for me who had a wife and six children to provide for and my little capital was about all gone. I had bought a cow and her milk was a great help in the family. It was now about the first of August, and I started out to look for work. I found work and kept the same job for two years. When coming up on the river steamer I became acquainted with a gentleman who lived in Andover who kept a place and did a large business in lumbering. He wanted me to go to his place with my family and he would give us a house to live in and give me good wages if I would stay with him and look after his garden and take care of some driving horses. I had declined his offer because we had come to make a home for ourselves. He, however, told me that if ever I wanted work to call on him, so when I wanted work, I applied to him and got a job already referred to. He asked me to work for him all the year round but I wanted to be home in the spring to put some crops in the ground. My wife and I talked the matter over and we thought best that I should stay with the gentleman the year round. It was handy to my home and my family was sure of plenty to eat. While I was working with this gentleman I was gathering things around home, such as a horse and the things that go with a horse to use on the farm.

After two years I went home to work my farm and got ahead by leaps and bounds. One thing that helped me to succeed was that my family stuck to the homestead and helped me to build up the home we now have. One of the drawbacks of this country is that credit is too easily obtained, but thanks to a very careful wife we never got into debt.

We now have a good, comfortable home and Mrs. Innes and myself can take things easy in our old age. Our family of eight are alive and all doing well. The farm consists of two hundred acres and my oldest son has one hundred acres along side of mine that are worked from the homestead. We have about one hundred acres cleared and under cultivation. During late years we have made a specialty of the selection of grain for seed purposes and have made a success of it as most of your readers know who have seen our exhibits at the various Maritime shows.

I do not write this letter in any boasting spirit but in compliance with your request as I thought my experience as an emmigrant might give others encouragement enough to go and do likewise. We have done nothing more than others have done and can do.

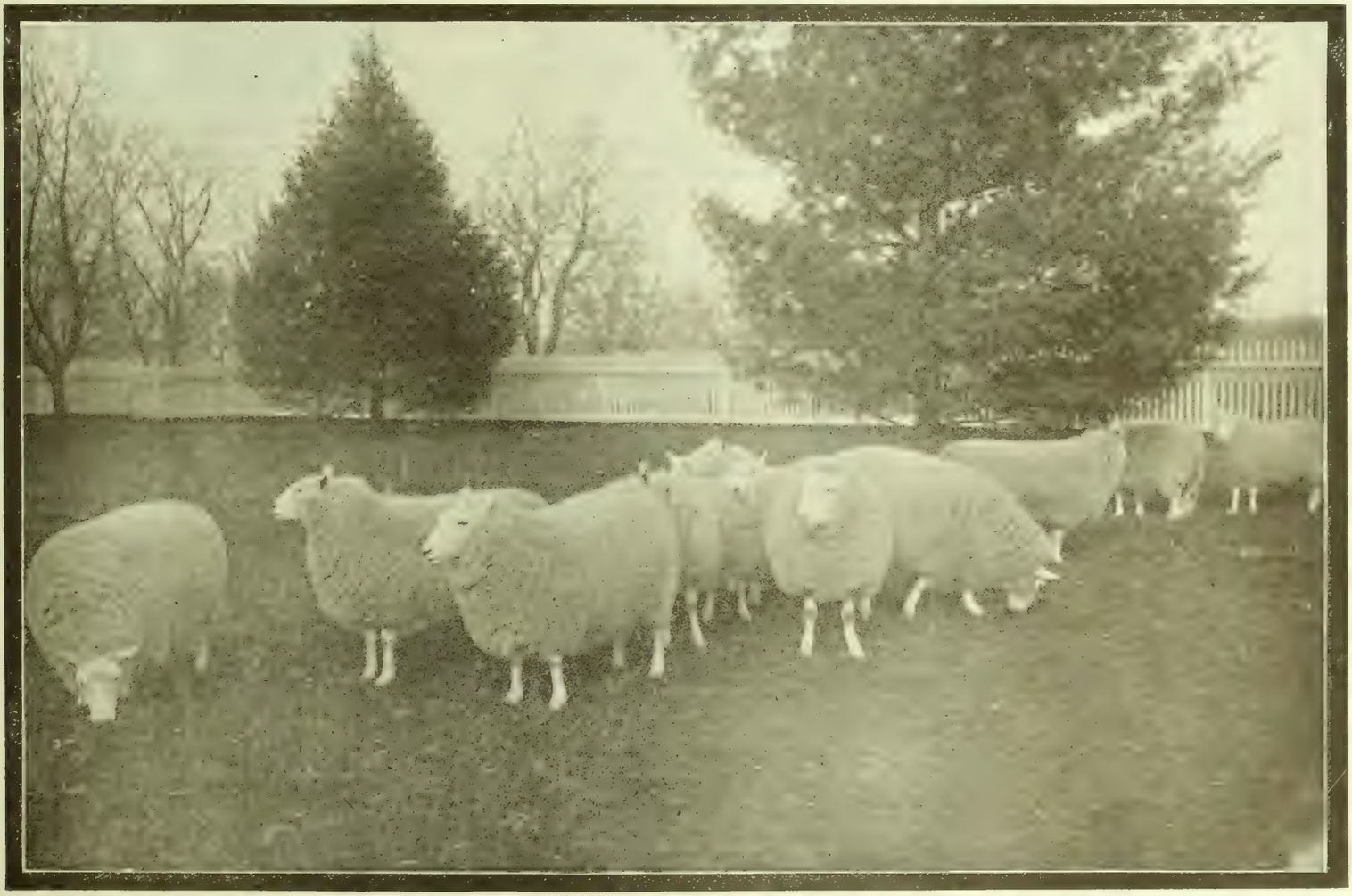
Our settlement consists of two roads, the Kintore road and the Kincardine road. We have five schools and three churches in the colony and we keep a minister all the time. We are all Presbyterians. The Presbytery of of St. John has been very good to us as a congregation and has given us much valuable assistance in maintaining our churches. In conclusion I would like to say that if our young men who go west would make up their minds to stay in New Brunswick and put the same energy into their work that they will have to do out West they would eventually reap more comfort and sociability. I do not deny that there are obstacles here but go where you will you will find drawbacks.

I believe a lot of Scotch emmigrants are coming to New Brunswick this spring and should this letter come to their notice they may take it as an invitation to come to see us in New Scotland where we will make them welcome and perhaps do them some good by giving them some of our advice and experience.

Now, after all, what do we live for? I hope not for money alone although we cannot get along without it but let us use it and not abuse it. According to the course of nature in a few short years we will follow those who have gone before and in giving up life's battles we feel that we have tried to do our part to make two blades of grass grow where one grew before. I never got one dollar outside of my own family although I could have borrowed money time and again for the asking, but I did not for the reason that some day it would need to be paid back again.

DONALD INNES.

Tobique River, N. B.



A THRIFTY FLOCK OF CHEVIOT SHEEP.

Agricultural Organizations in New Brunswick

For a correct understanding of the position of New Brunswick in regard to its agricultural organizattions it is necessary to relate the agricultural history of the province at some little length. This province was not at its earliest settlement nor has it been since considered as a distinctively agricultural province as have been Ontario and P. E. Island. Its enormous tree growth and the furnished so much profitable occupation and revenue that its small population has been largely engaged in fishing and lumbering and pursuing agriculture only generally as a side line.

The people coming to New Brunswick have not been as a rule people trained in agriculture and though they were located amid great agricultural possibilities have but in few instances exploited or developed their opportunities.

In pioneer days there were a few families who distinguished themselves as farmers but they did not seem to have found it necessary or perhaps possible to co-operate to advance their business.

The first agricultural society organized in N. B. was in the city of St. John under the patronage of Governor Carleton in 1790. In 1819 the Charlotte Agricultural Society was formed at St. Andrews and it continued to exist until about ten years ago, when it was superceded by a Farmers Institute.

Shortly after this a society was formed in Fredericton, known as the "Central Society for promoting the rural economy of the province." In 1825 another society was formed at Fredericton called "the Agricultural and Emigrant Society." This latter society took the place of the original institution and the funds of the former were handed over to it. There also appear to have been societies formed elsewhere in the province under the names of "Agricultural and Emigrant Societies." In 1826-27 some £700 was handed over to the Fredericton society by the government and the money was used to import pure bred stock from Great Britain said to be the first importation of stock from Britain made by any British North American Colony. These cattle were undoubtedly Shorthorns as known in England at that the splendid, large, heavy-milking cattle of this country which some men living today can well remember.

Just how long this society at Fredicton existed does not appear from any information at the disposal of the writer, but it was not until some time in the forties when agriculture was very much depressed that a new move was made.

In 1849 Prof. J. F. W. Johnson of England was invited by the Legislature of the Province to visit and make a report upon its resources. This report, admirable and comprehensive as it was, does not seem to have been immediately productive of agricultural development. A central agricultural society was, however, organized for the province, in 1850, and, undoubtedly, did some good work. It held the first provincial exhibition in 1852, an exhibition which seems to have been the first real demonstration of the agricultural capabilities of the province, a demonstration which surprised the people themselves. Visitors from abroad stated at the time that the exhibits of field crops, etc. were superior to those they had seen at exhibitions in the Canadas, the United States or in Scotland. The Central society sent speakers around to encourage the starting of societies in the various counties of the province, many of which lived, did good work and have continued, forming the foundation of societies now existing.

By 1855, the Central society seems to have ceased to exist. On December 13th, 1856, a commission was granted to Dr. James Robb, Geo. Kerr, Charles Perley, Geo. L. Hatheway and Hugh McMonagle to investigate the agricultural conditions of the province with a view to the public encouragement of agriculture. This Commission strongly recommended the establishment of a Provincial Farm where should be demonstrated the best farm methods and where improved stock and seeds should be raised and sold to farmers of the province. They also recommended the establishment of a Board of Agriculture. These recommendations were not immediately adopted. However, in 1859 a Provincial Board of Agriculture was created of which George Kerr was the first chairman and Dr. Robb the first secretary.

Thirty local agricultural societies the first year made returns to the Board. This Board which was elective from various stated districts of the province administered agricultural affairs until 1875. During the latter years of its existence it was the subject of criticism regarding its financial management especially of exhibitions and at the session of 1875 an Agricultural Act was passed vesting the administration of agriculture in the Executive Government through a secretary for agriculture. At this time there were 48 local agricultural societies receiving government grants totalling $11,014.

In the winter of 1875 there was held by invitation of Nathaniel Hubbard, Burton, Sunbury Co., a meeting at his residence attended by the leading farmers of that county. Various agricultural matters were discussed as well as a proposal to call a general meeting of the farmers of the province for organization.

In 1876 the late Hon. W. D. Perley then of Maugerville, issued a call for a provincial convention to be held at the Burton Court House in Sunbury much enthusiasm as there was a general feeling that the Government by abloishing the Board of Agriculture had prevented the farmers of the province having that oversight and influence in agricultural administration which in their opinion was desirable.

An association was organized at this meeting known as the Provincial Farmers' League, an association which lives today through continuous annual meetings and now known as the Farmers' and Dairymen's Association of New Brunswick. This association at first concerned itself considerably with the administration of agricultural affairs and no doubt its influence largely resulted in the Agricultural Act of 1880 which created once again a Provincial Board of Agriculture.

This Board continued in existence the members being elected by the various agricultural societies, until 1888, when after it had started upon the investigation of the accounts of the famous $30.000, Horse Importation it was summarily legislated out of existence and the agricultural administration placed under a member of the Government who at the time was also Provincial Secretary. By this Act of 1888 the Province was divided into agricultural districts in each of which it was designed there should be an agricultural society. By regulations then prescribed it was permissive for agricultural societies to send delegates to the Provincial Farmers' and Dairymen's Association annual meetings and to pay their expenses.

In 1892 an appropriation was made for the encouragement of dairying by the Legislature and by the suggestion of Prof. J. W. Robertson, Dominion Dairy Commissioner, delegates were sent out to give practical dairy instruction and to organize Local Dairy Associations. A considerable number of these associations were formed and it was made compulsory upon these associations, if they were to receive the government grant of $25 per year that they should send delegates to the Provincial Farmers and Dairymen's Association meetings. While this legislation was in force these provincial meetings were largely attended and the Local Dairy Associations' work resulted in the starting of many creameries and cheese factories.

In 1897 the Department of Agriculture was created, the Commissionership of Agriculture was made a separate portfolio in the Government and the office of Deputy Commissioner was created.

Up to this time various agricultural meetings throughout the province had been held under the management of the Farmers' and Dairtmen's Association, but after the Department was created this work was taken over by it. About 1501 the local dairy associations failed to receive the countenance of the Department, a Farmers' Institute System was adopted, the Deputy Commissioner being made Supt. of Institutes and later also taking over the Secretaryship of the Farmers' and Dairymen's Association and the small grant annually going to that association discontinued. The result was a great lack of interest in the association, it was apparently felt that its affairs were entirely in the hands of the Department and the fact that its officers, as nominated by committee, were largely of the political party supporting the then administration, led to the withdrawal of many men of independent turn of mind from its meetings.

The Association at this time failed to represent the farmers as a body and its meetings dwindled to a very small attendance.

With the change of Government in 1908 came a change of policy in regard to the Farmers' and Dairymen's Association and the new Commissioner requested the association to elect all of their own officers independent of officials of the Department. The result has been a very different spirit among the members of the association and the attendance at the meetings has regained almost its old time size.

When the Farmers' Institute system was adopted in the Province each Agricultural Society was asked to take up the Institute work and in some places where societies did not exist Institute organizations were formed, each of which received an annual grant of $15 from the government. Three of these Institutes still exist the others have organized themselves into agricultural societies.

Since 1908, 30 new agricultural societies have been organized whereas there were 60 societies then, there are now 90 and the appropriation for grants to these societies has been increased from $8,000 per year, then to $13,000 in 1910.

A Provincial Fruit Growers' Association was organized in Decem. ber 1904, and has since been holding annual meetings and fruit displays in connection therewith. It has also held various local meetings and while it has not extended its field of operations over much territory has done good work in the St. John Valley.

Such then is the history of the agricultural organizations of New Brunswick with the exception of the co-operative cheese and butter manufacturing associations which were more of a trade organization and which unfortunately have not survived the conditions which they met.

At the present time therefore we have evolved from our history and experience,—

1. The Farmers' and Dairymen's Association of New Brunswick with a record of 35 consective annual meetings. It is today an independent and voluntary association of farmers, representative of them. It grapples with questions of provincial importance to agriculture and rural life and makes suggestions to the Governments in regard to many matters. It does not receive any Government aid except that in its educational work the Department pays the expenses of halls, speakers, etc., as may be mutually agreed upon. It is made up largely of delegates from the local agricultural societies which send them and pay their expenses in attending its annual meetings. It has a wide field of usefulness before it being the one general organization of provincial farmers through which they can can speak to Governments, Railways and other Corporations. It may also be of great educational value if it so desires, extending its meetings to become short courses of instruction in various lines, and it can reach out and co-operate with the school teachers, the country clergy and all who come in contact with rural conditions.

2. The New Brunswick Fruit Growers Association. This organization also has a great future. New Brunswick is pre-eminently a natural apple growing country and the successes which have been attained in Nova Scotia and the west coast may be repeated and excelled uon a much larger scale throughout the length and breadth of this province. To enthuse the people of New Brunswick with their magnificent fruit growing possibilities and to attract millions of capital to develop the industry, to build up a great fruit fruit export trade and make the name New Brunswick noted everywhere the choicest apples and pears are eaten is a prospective work large enough and promising enough to give this association ample scope and stimulus.

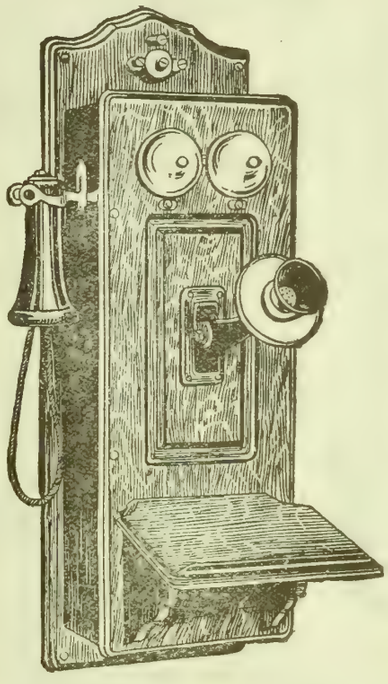
3. The Local Agricultural Societies. These associations have an almost unlimited scope for usefulness under the charters and regulations that govern them. The fullest measure of home rule consistent with systematic work is given them. Any work for the improvement of stock of seeds of farm methods and machinery, all kinds of competitions, exhibitions and educational work are allowed them. They receive substantial financial assistance from the Province and form a basis of organization for their members which may be developed in so many ways that no progressive farmer can afford to ignore them or the benefits they extend to him. The policy of the Department is to help those societies most, which most largely help themselves and if the members of these societies will but work together unselfishly for the common good there is scarcely a limit to what they may accomplish for the rural life and progress of the Province.

The time is no doubt coming, and coming soon when special departments of farm work outside of fruit growing will find it desirable to organize upon a provincial scale. Already we have small poultry associations organized for the holding of exhibitions. A provincial organization for this branch looks advisable. Seed growers, Bee Keepers and other Seed Growers, Bee Keepers and other coming together and the Department of Agriculture will be found ready to do its part in assisting such efforts in every way that a Government properly can.

W. W. HUBBARD.
Secretary for Agriculture, Fredericton. N. B.

Telephone Quality !

WHAT IT MEANS



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"The best way is always the cheapest," is an old saying, but nevertheless is true. In no line does it apply, however, with such force as it does in regard to a telephone.

A dollar or two is the difference between a good telephone, that combines all the latest and best in the telephone art, with first class material and the highest class of workmanship, and the inferior telephone that is not up-to-date, and is made of second class material, or worse yet, of "made-over" parts.

The low priced telephone starts to go out of order and in one week it will cost you two or three dollars in time and trouble to make the necessary trips to put it right. Think what this amounts to in a year where you have 10, 20 or 50 such telephones on your line.

Quality Sells the Goods

The force of the above telephone reasoning was recognized by us when we started to manufacture telephones and we spared neither time nor money to get the highest standard of quality. Our success has shown that we were right. We have, during the past three years, vastly increased the number of our customers. The record of our telephones on one line made customers for us on a neighboring line. In other instances, companies using another make, gave us a trial order and after practical use, adopted our telephones. We have already the assurance that enables us to say that this Spring will see scores of companies leave the telephones they have been using and equip their new lines with Canadian Independent telephones. Thus quality wins out and our business is maintained on the only permanent basis.

Get Our Bulletins

If old operators are coming over to us, any new companies should consider well before deciding on the telephones they will use. Do not buy without writing us. If you want any telephone information, write us and ask for our No. 2 Bulletin.

Construction Supplies

We carry a full stock of construction supplies, and can fill all orders promptly. It will pay you to let us quote you prices.

PROMPT SHIPMENTS AND GUARANTEED SATISFACTION ARE MAKING OUR SUCCESS.

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18-20 Duncan Street, - - TORONTO, ONT.

GOOD REPORTS

Home Mixed Stock Food a Success

A short time ago we published in this column a formula for preparing Stock Food at home from Barnes English Compound and fresh nutritious grains.

We have received so many words of praise for this formula that we are reprinting it for the benefit of those who may have chanced to miss it.

The advantage of making your stock food at home, using only the pure medicines and fresh grains, and avoiding harmful drugs and worthless fillers, is certainly of great importance to every farmer and stockman.

The formula is as follows: Mix three pounds of Linseed Meal and six pounds Cornmeal with one pound Barnes English Compound, it will make ten pounds purest and strongest stock food that can be made. S. G. Amsden, Windsor, Ont., will send one pound package postpaid on receipt of 50 cents, money order or stamps.

Irish Cobbler, Triumph, Green Mountain and Delaware

Choice SEED POTATOES

Now on hand.

Send your order in early.

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Fredericton, - - N. B.

Buchanan's Swivel Carrier and Harpoon Steel Fork

The principle is right—the materials are right—and the making is right. This carrier has no wires or steel springs—because springs weaken, wear out and cause trouble.

Our new Steel Track Carrier is made of malleable iron. The track is double angle steel, supported at every pair of rafters with patent clamp and collar tie.

With our Swivel Carrier and Harpoon Fork or Sheaf Lifter in your barn—you can harvest your crops in one-third the time and save the wages of two or three hired men, besides getting more hay, grain, etc., in your barn.

We also make Carriers for Wood Track and Rod and Cable. Since 1875, we have been perfecting Pitching Machines and Haying Tools. Today, we can offer you, the best beyond question, in Canada. Write for catalogue. 3

M. T. BUCHANAN & CO., INGERSOLL, ONT.

Preparation for Spring Seeding.

Editor Maritime Farmer:—

Now that spring is close at hand, all agriculturists are turning their minds towards the various problems of out-of-door spring work, which might be classified under two headings; viz: tillage and preparation of grain. Proceedure in tillage depends on the character of the soil, drainage, fall plowing or spring plowing, weeds, and the crop for which it is intended. Should the land be wet, intended. Should the land be wet, cold and late, owing to lack of drainage under drain this soil as soon as you possibly can. It will pay for itself inside of three years in the crops received, to say nothing of saving of machinery and ecomony of labor. On land which is weedy, we plan to harrow in the spring as soon as possible, performing this operation weekly, until the crop is planted. Thus we free the soil of weeds by germinating seeds in the upper four inches of surface of soil and killing them with the harrow. In our four year rotation, we apply the manure but once, viz. to the root crop. This is spread in the spring and either disced or gang-plowed under. If, however, the soil is very poor, the same treatment might be given the second year for grain.

Another question which presents itself is that of early seeding. Should the land be free from weeds, plan to get the crop in as soon as weather permits. This almost invariably induces greater yield of crops with wheat, oats and barley, seeded in that order. We attribute this to the following reasons: Early cultivation means, the conservation of the moisture accumulated in the soil during the winter. Various experiments have proven that the difference of one week in seeding oats after the ground was fit resulted in a loss of 6 to 9 bushels of grain per acre from delay. It also induces the drying out of the surface for seeding and the killing of weeds. Invariably we find a much heavier root system, hence greater drought resistance, earlier maturity, more uniformity in ripening and better weather conditions for harvesting. Should our grain show somewhat yellow after coming up from early seeding in a wet spring, we often use 150 pounds Nitrate of Soda per acre to correct this lack of free nitrogen in the soil and force the crop along as much as possible. All these points are largely influenced by the amount of water in the soil and a thorough knowledge of under drainage will aid us in regulating methods of tillage and earliness of seeding.

As to the preparation of grains for spring seeding, I would lay greatest emphasis on the cleaning and grading of the same. This can easily be done with a first class grain grader and fanner; the "Perfaction" mill, put out by the Templin Manufacturing Co., of Fergus, Ontario, is considered by good authorities to be the best on the market. This machine not only takes out chaff, dirt and weed seeds, but

DR. J. WOODBURY'S HORSE LINIMENT

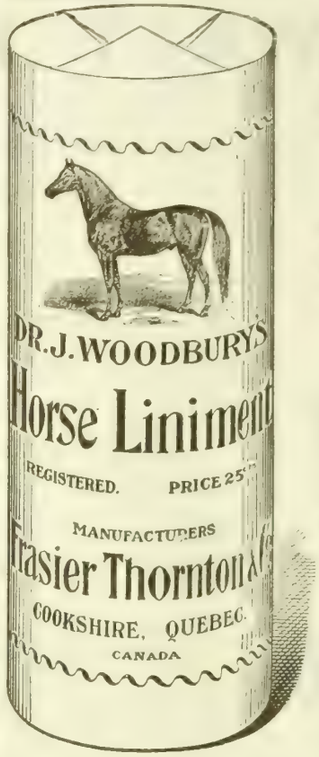
INFALLIBLY THE REMEDY

For the removal of Splints, Bog Spavins, Enlargements of any and every description it has no equal. Given internally, it will promptly relieve and remove any and every character of Cough, Enlargements of the Glands, Affections of the Kidneys. For Distemper, Strangles and Colic it is infallibly the remedy.

All horses that are stabled should have an application of Dr. J. Woodbury's Horse Liniment to the hoofs of the fore feet to prevent their becoming feverish, dry, brittle, hard, contracted or otherwise injured.

Insist on having Dr. J. Woodbury's Horse Liniment. We warrant it to effect that for which it is recommended when used according to directions.

Its beneficial effects are so prompt and decided that it has excited the admiration of the leading horsemen of the Dominion and secured their highest confidence.



Bear River, N. S.

Dear Sirs:—We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it. Yours truly,

CLARKE BROS.

Hubbard's Cove, N. S.

Dear Sirs:—I have used Dr. J. Woodbury's Horse Liniment in my stable for years and consider it the best liniment on the market for both internal and external use. Yours truly,

C. C. McLEAN.

Truro, N. S.

This is to certify that I have used Dr. J. Woodbury's Horse Liniment with the very best results for colds, coughs, distemper and all lung diseases. It is the best thing to give horses in the spring to keep them in condition. It purifies the blood, cleanses the lungs from impurities, which may exist, and gives the system healthy action.

NEWTON LEE,
Owner "All Right," 5817.

Elmsdale, N. S.

Dear Sirs:—Kindly send me 6 dozen Dr. J. Woodbury's Horse Liniment. I have not a bottle in the store and it is the only kind my customers will take.

Yours truly,
ELMSDALE MERCANTILE CO.,
Elmsdale, N. S.

Dear Sirs:—I cured my horse with Dr. J. Woodbury's Liniment. It was a bad case of distemper. I always recommend this liniment to my friends as the best for all diseases of the horse.

Yours truly, H. R. WHITEHEAD.

Dear Sirs:—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months' standing. In my large experience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends. E. J. ANDERSON, Truro, N.S.

Manufacturers:

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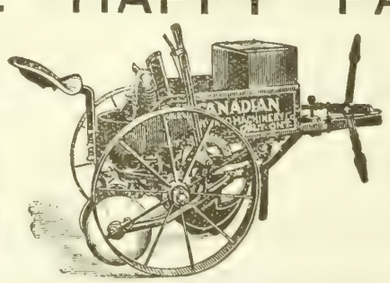
LET THE HAPPY FAMILY DO YOUR WORK

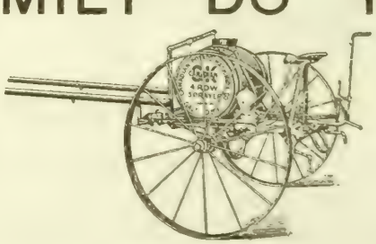
Seed Cutter.

Operated with the foot. Both hands free to handle seed.



Automatic Planter.

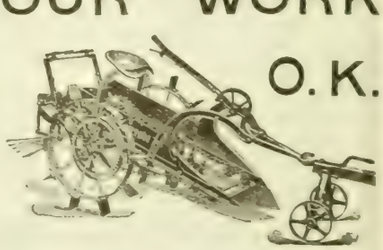
With or without fertilizer attachment. Has all the essential qualifications to plant potatoes correctly. Does not puncture or bruise the seed.



1909 Model.

Four Row Sprayer.

Sprays four rows with Bordeaux while you drive.



Two-Horse Elevator Digger.

Puts them on top where you want them with two horses.

THEY ARE WORLD BEATERS. WRITE FOR CATALOGUE.

Canadian Potato Machinery Co., Ltd., Galt, Ont. The only manufacturers in Canada of a complete line of successful Potato Machines

Troubled With Constipation For Years.

Any irregularity of the bowels is always dangerous to your health and should be corrected at once for if this is not done constipation and all sorts of diseases are liable to attack you.

Milburn's Laxa-Liver Pills cure Constipation and all Stomach, Liver and Bowel complaints.

Mr. Henry Pearce, 49 Standish Ave., Owen Sound, Ont., writes:—"Having been troubled for years with constipation, and trying various so-called remedies which did me no good whatever, I was persuaded to try Milburn's Laxa-Liver Pills. I have found them most beneficial; they are, indeed, a splendid pill, and I can heartily recommend them to all those who suffer from constipation."

Price 25 cents a vial or 5 for $1.00 at all dealers, or sent direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

F. C. WESLEY CO.

ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street.

St. John, N. B.

LOGICAL ECZEMA CURE ENDORSED BY PHYSICIANS.

Dr. R. A. Folkerts, of Duluth, Minn., tells of his success in treating patients with D. D. D. Prescription:

"There was a man here suffering from eczema for the last fourteen years, and I applied the D. D. D. treatment. I also applied it to a man of West Duluth, Minn., whoihas been suffering with Eczema in his feet, and the second treatment in both cases cleared the skin almost absolutely. The first application is a balm, and its soothing effect is beyond expression. I shall never be without it, and shall use it among my patients altogether."

No matter how terribly you suffer from eczema, salt rheum, ringworm, etc., you will feel instantly soothed and the itch allayed at once when a few drops of this compound of oil of wintergreen, thymol, glycerine, etc., is applied. The cures all seem to be permanent.

For free trial bottle of D. D. D. Prescription write to the D. D. D. Laboratory, Department F. M., 23 Jordan St., Toronto.

For sale by all druggists.

"SILVER PLATE THAT WEARS"

The Silversmith Knows

that spoons, forks, knives, etc., of best reputation bear the trade mark

"1847 ROGERS BROS."

The 50 years since they were first introduced have developed nothing better.

In buying Tea Sets, Candelabra, Trays, etc., ask for the goods of

MERIDEN BRITA CO.

separates the grain into three distinct grades, viz., large heavy grains, small heavy grains, and light grain. The first grade is the only one which any farmer can afford to sow. This invariably gives greatest yield of the most uniform grain. Experiments in various parts of Canada and the States has proven definitely that the difference in yield under average conditions between grades 1 and 2 will be from 5 to 7 bushels per acre in favor of the former. Then again, many farmers are changing their varieties of grain about every third year. This is due to several causes. 1st, there is an idea that a change of seed every third year is necessary to produce the best results. This is erroneous, for I can point out scores of farmers in the Maritime Provinces who, with a good fanning mill, have produced their own seed for 12 years and over, and the variety has improved with them. Another reason is that many farmers do not realize what variety is most suitable to their conditions or are still dubious as to whether the black or the white oat is superior for feeding. Whether the variety be black or white, we demand in oats greatest yield, thinness of hull in order to give a high percentage of kernel (oatmeal), quality and quantity of straw. Choose a good variety with these characteristics and improve the same by proper selection. To farmers who are buying seed, I would advise purchasing the same from a member of the Canadian Seed Growers' Association. The pedigree stands for just as much in grain as it does in live stock, as the laws of heredity are just as strong in one case as in the other. Should there be any trouble with smut in the crop of last year, treat seed for the coming season with either formalin or blue stone.

Just a word as to rates of seeding and I am done. In a series of experiments conducted at the Agricultural College, Truro, N. S., in 1909, it was found that even in a year of poor stooling of grain seeding at the rate of from 2 to 2½ bushels per acre gave the highest results. This but agrees with similar experiments conducted for many year in succession at the Ontario Agricultural College, Guelph, and like institutions. But not only is it more economical in the seed bill and more productive in harvest, but it regulates, to a large extent, the strength of the clover crop seeded down with the grain. This to the stockmen, who is, after all, the best farmer, is of far greater importance than the difference of a few bushels per acre in his oat crop. Consider that a good catch of clover means in the first year about three tons per acre of feed far more valuable than the same quantity of timothy or any of the grasses. At the same time, it leaves in the soil fertilizer equivalent to 7 or 8 tons of barnyard manure per acre. A failure to produce a good catch of clover might be attributed to the following causes: Poor seed, poor tillage, inadequate drainage, weeds, absence of nodule forming bacteria and the too heavy seeding of the nurse crop oats, barley or wheat,) which shades and partly smothers the tender clover plants.

Could we but regulate all the above influences, it would increase the production of our lands throughout the Maritime Provinces to a very large extent.

E. S. ARCHIBALD.

Truro, N. S.

"A good Range and good Cooking is essential to the health and contentment of every home."

BUY A UNIVERSAL FAVORITE AND YOU BUY THE BEST

Note the large Oven, 16 loaves of bread in pans 4½ x 10 at one baking.

You take no risk, as every Range is fully guaranteed.

Universal Favorite

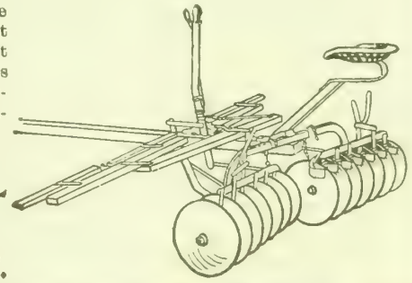
Manufactured by
FINDLAY BROS. CO., Limited,
Carleton Place, Ont.

FOR SALE BY ALL LEADING DEALERS

The "Bissell"

is the lightest-draft harrow

Because of its astonishingly light draft time after time the "Bissell" Disk Harrow, in field competition, has done DOUBLE the work its competitors have accomplished under same conditions. The special shape of the "Bissell" Plates allow them to enter the ground easier and turn the soil with less effort. Steel blades, meeting the plates "Chisel fashion," keep the plates thoroughly clean. The space between the plates is kept clear of trash by movable clod irons—the only Harrow that has this feature. Sand bands protect the ball bearings from dust. The seat is placed back of the Harrow. In this way the weight of the driver rests over the frame, and neck weight is removed The hitch is well back which is still another draft —reducing feature. Search the continent over and you'll not find a Harrow of such light draft and correct proportions as the "Bissell." For further particulars write Dept. M. for catalogue or see your local dealer.



T. E. BISSELL
Company, Limited,
ELORA, - ONT.

Nitrate of Soda

The Modern High-Grade

Fertilizer

Cheapest, Cleanest

Odorless

Can be used anywhere on any crop

Convenient for use

Increases your farm values

$3.00 worth of Nitrate alone on an acre of Grass has given an increased crop of 1000 lbs. of barn-cured Hay.

Prime hay has sold for $25 per ton in New York this season.

Books on the crops which interest you will be sent free.

Send name and address on Postal Card

DR. W. S. MYERS
Nitrate Propaganda
71 Nassau Street, New York

RUSH'S U-BAR STEEL STANCHIONS

are swinging stanchions. See the comfort and freedom they give cattle. Are strongly made to stand roughest usage, and save lumber and labor in fitting up cow stables. Saves time in trying cattle, because the latch is easily operated and absolutely secure. Made in five sizes. Write for catalogue and prices.

A. M. RUSH,
King St.,
Preston, Ontario.

Roses and Baby Ramblers.

Mrs. A. C. L., Grand Falls, writes:—"Please tell me through the Maritime Farmer whether roses can be grafted or not. If so, at what time of year; and how?

My Tea Roses and Baby Ramblers, that have been kept in the house all winter, have the under side of the leaves covered with tiny lice, some of which are a faint pink color, and others, larger, have darker spots on the back. The leaves turn yellow and drop off. The leaves also seem to be covered with a fine web. Will these lice kill the roses? What will kill the lice?

Please give directions for cultivating water lily (Nymphoea Odorata). Would May first be too early to plant the roots in this climate?

Will Tea Roses and Baby Ramblers, that have bloomed in the house this winter, bloom again this summer if set in the garden.

Ans.—Roses can be grafted like apple trees, but it is not usually done, and, in fact, its success is so problematical in this climate, that it is hardly worth giving directions. The process commonly used is that of budding, and is done as follows: A good thrifty cane is selected and an incision made about six inches from the ground, one cut being across the stem about half way around; another about an inch long straight down from the centre of the first. With a dull knife lift the bark each side of the perpendicular cut making a V shaped wound with the square part at the top. Then from the rose you wish propagated take a bud from the axis of a leaf stalk, (breaking the stalk from the stem of course) and trimming the edges to fit your incision, place it smoothly therein, taking care that this sap wood on each will fit smoothly together. Place the flaps of bark back over the inserted wood just leaving the point of the bud out. Warp together above and below the bud with rubber tape or surgeon's plaster, leaving the tip of the bud uncovered. Grafting wax and strips of cloth or tough paper are commonly used by growers, but the above is an excellent substitute for the amateur. As soon as the bud begins to grow, cut off the parent stem, just close above the bud and wax it over or cover with the material named above. Three weeks should tell the story whether your buds will take or not.

The Baby Ramblers and Tea Roses are infested with the common Red Spider and can be cleaned by the forcible application of water to the underside of the leaf. This must be done once a day, every sunny day, with a syringe or some instrument that will apply the water with considerable force. Do not spray roses during dark weather. By spraying every fine day for two weeks you should overcome this pest, but frequent spraying must be observed, until they go out of doors, or the insects will return.

To cultivate Nymphoeas in the yard provide half an oil cask, wash as free of oil as possible, dry thoroughly in the sun and put bottom about eight inches of rotted manure, then about six inches of black mud. Place the roots in this and keep about six inches of water constantly over them. In this winter, as soon as ice forms on the water, place the tub in the cellar.

To plant them in a natural pond, if the bottom is soft, tie a stone about the root with twine (not wire) and throw them to the location desired. They must be planted in a place that will never be entirely uncovered with water, yet where the normal depth will not be over two feet.

Roses that have been forced in the house must be partially dried off and rested for, not over two months. To flower in the summer roses must have their preoid of rest. H. E. G.

Results of Experiments in Different Methods of Milking.

In a late bulletin of the Virginia station on "The Production of Clean and Sanitary Milk," some very comprehensive experiments were made to determine the source of bacteria in the station barn and the relative merits of the precautions taken to avoid contamination.

There were five cows milked over a period of six days, under the following conditions:

The cows and the stables were thoroughly cleaned and all places from which dust might be distributed were sprinkled, except the bedding. The first cow was milked into an open pail with flanks and udder moist, and a sample taken. The bedding was then thoroughly moistened, and the next cow milked with other conditions the same except the moistening of the bedding. The next cow was milked without moistening the flanks and udder, all other conditions being the same as No. 2. The next sample was taken with bed and flank moist, and a pail having an opening about six inches in diameter, which was covered with sterile cheesecloth. The next sample was taken the same as No. 4, except the first four strippings from each teat were discarded.

The average bacteria per c. c. for the first cow was 2,406; for the next 1,121; for the third cow, 1,452; for the fourth cow, 844; for the fifth, 730, the lowest.

It is interesting to note the results where open pails were used, as against the narrow mouthed or closed pail; the former showing, considerably a larger number of bacteria.

The open pail is easier to milk into for the careless or indifferent milker but that is not the sort of milker who is profitable to have in your stable.

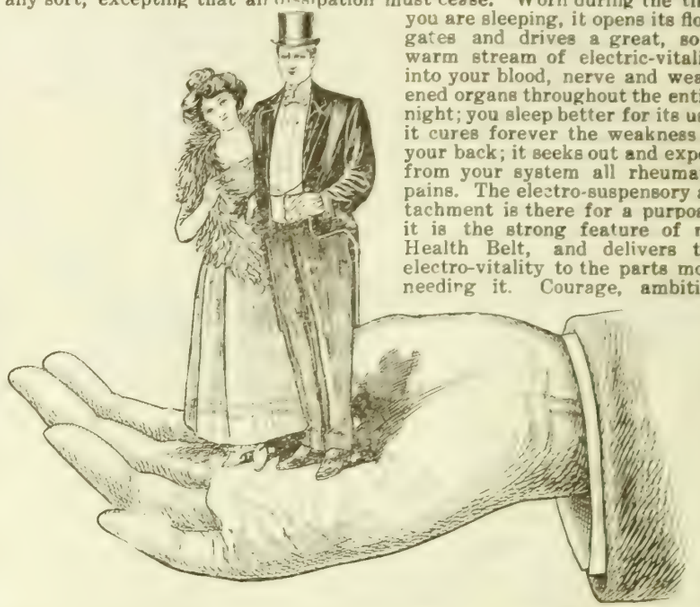
I Present to You a "Health Belt Man"

He is 55 Years "Young."

Yes, 55 years young; not 55 old for My Health Belt poured vitality into his blood, nerves and tissue until

HIS VIGOR WAS RESTORED

My marvelous HEALTH BELT is a Wizard Worker, a mechanical self-treatment of the highest therapeutic value. It stands by you and never abandons its task until you are brought back to a state of vigorous Manhood, without an ache, pain or weakness. No drugs, no dieting, no restrictions of any sort, excepting that all dissipation must cease. Worn during the time you are sleeping, it opens its flood gates and drives a great, soft, warm stream of electric-vitality into your blood, nerve and weakened organs throughout the entire night; you sleep better for its use; it cures forever the weakness in your back; it seeks out and expels from your system all rheumatic pains. The electro-suspensory attachment is there for a purpose; it is the strong feature of my Health Belt, and delivers the electro-vitality to the parts most needing it. Courage, ambition



and a new view of life, with full self-confidence, surely result. It makes you young and keeps you young, with the fire and vigor of the biggest, fullest blooded man you ever saw. The "HEALTH BELT MAN" cannot grow old, for he knows the secret of perpetual youth. It will place you in the "feeling fine class." "I am a man again, thanks to your wonder-working Health Belt. Use my name as you see fit." So writes C. L. Snell, of Middleport, N. Y. So have said thousands before him.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it doesn't do the work.

These Wonder Books are

FREE

Call or write for them to day

Fill in the coupon and let me get these wonder Health Books into your hands. They are sent free, sealed, by mail, and give certain health and nature facts which every man (young, middle aged or old) should have. They fully describe my Health Belt, and are beautifully illustrated. I have known 100,000 men who sought my aid—I should know you.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs,—Please forward me your Books, as advertised, free,

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ADDRESS .....

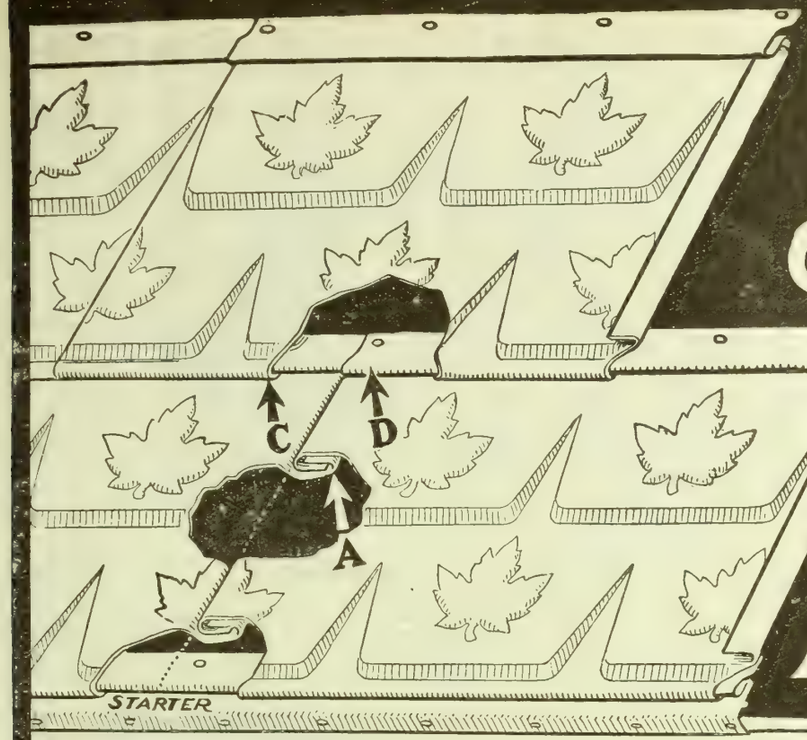
MICA ROOFING

For steep or flat roofs, waterproof, fire proof; easily laid; cheaper than other roofing.

Send stamp for Sample and Mention this Paper.

HAMILTON MICA ROOFING CO.

101 Rebecca St. - - Hamilton Can



Note the Safe-Lock Construction of PRESTON SAFE-LOCK SHINGLES

Safe-Locked on All Four Sides

Don't make the mistake of thinking that all makes of metal shingles are very much alike. There is a vast difference between PRESTON Safe-Lock Shingles and others.

Unlike other Shingles, PRESTON Shingles do not merely slip or slide together. Instead, they are SAFE-LOCKED on all FOUR sides. The picture above shows how.

Look at ARROW A. See how the sides of the shingles hook over each other. This is on the principle of the "sailor's grip." It is utterly impossible for shingles locked in this way to pull apart. The heavier the strain, the firmer the grip.

Twice as Strong

The top lock of PRESTON Shingles is TWICE as strong as our wonderfully secure side lock. It consists of three thicknesses of sheet steel—see ARROW B.

The top of the shingle is where the greatest strain falls. Yet the top lock of most other metal shingles isn't as strong as the side lock of ours.

ARROW C shows how the shingles above hook over and lock securely to row below.

Nailing Is Protected.

ARROW D shows the method of nailing together the top locks of two adjoining shingles. The top lock of the right hand shingle overlaps the one on the left. The nail goes through both shingles.

All nails on the flange of the top-lock are covered by the shingles on the row above. Thus all nails are protected from exposure to the weather. They cannot rust or work loose. They are there for keeps.

So strong are our locks that there has not yet been a gale powerful enough to rip off a roof covered with PRESTON Safe-Lock Shingles. The terrific wind storm that swept over Ontario on April 8, 1909 ripped off scores of wooden, metal and prepared roofings. Yet not one of these metal roofs was a PRESTON Safe-Lock roof.

Gale-proof Shingles

So close do PRESTON shingles lay to the sheeting and so secure are the Safe-Locks that even if some of the shingles were not nailed the roof would be solid and wind-tight.

It is utterly impossible to get PRESTON Shingles off the roof in any other way than by removing the nails one by one and unlocking each shingle separately. When you put PRESTON Shingles on your roof they are on to stay.

Snow-proof, too

No snow can be driven up PRESTON side locks and on to the sheeting below. The fold of our top lock closes right down over the end of the side lock. No rain or snow can be forced past this fold of sheet steel, unless you drill a hole through it first.

Just how easy it is for snow or rain to be driven up the side joints of other shingles you can readily see for yourself.

Simply fasten the sides of two ordinary shingles together. Then hold the shingles up and look through the joint. You can see daylight through it. That means there is an unobstructed passage through which rain or snow can be driven by the force of the wind.

Make the same test with PRESTON Shingles. You cannot see daylight through our side locks. That means the ends of our side locks are closed securely against wind and weather.

Generous Folds

The folds of PRESTON Safe-Locks are of such generous size that there is room and to spare for expansion and contraction due to excessive heat and cold. Even the shrinking of the wood sheeting or the heavy strain due to the settling of the building is not sufficient to make any difference to our safe-locks, whereas other shingles will pull apart and leave spaces for leaks.

Patented Construction

You understand now why PRESTON Safe-Lock Shingles are so different in construction from other metal shingles. They will always be different and better, too. We were the originators of the interlocking Shingles. The patents we hold prevent others from making as good a shingle.

British Government Specifications

It is a well known fact that the British Government is the most particular buyer in the world. Ordinary metal shingles could not pass their Acid Test for galvanizing. This test is more severe on the galvanizing than twenty years of Canadian weather. Yet PRESTON shingles will easily pass this test.

PRESTON Shingles are made and galvanized according to British Government Specifications.

Twice the Service

Shingles galvanized according to these specifications are good for twice the service of shingles galvanized in the ordinary way.

Lightning Guarantee, Free

We have been making PRESTON Safe-Lock Shingles for eleven years. In all that time we have never heard of lightning damaging a building roofed with PRESTON Shingles.

So positive are we that a roof of PRESTON Shingles is lightning-proof that we give you a lightning guarantee free. This proves to you our unlimited confidence in the lightning-proof quality of PRESTON Shingles.

Most Quickly Laid.

As PRESTON Shingles are cut accurately to size, and the locks carefully made, they lock together quickly.

A man and a helper can lay 10 squares of PRESTON Safe-Lock Shingles in a day, whereas 5 or 6 squares would be a good average with ordinary metal shingles. If you have a large surface to roof that saving of time and labor means a good deal to you.

Booklet Reward

We have just issued a new booklet, "Truth About Roofing." We should charge something for this, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us. Just you mail it today, or you'll forget it.

Metal Shingle and Siding Co. Limited

Head Office, King Street Factory, Preston, Ont.

Branch Office and Factory, Montreal.

1

Please send me your new booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles, British Government Specifications and Free Lightning Guarantee.

Name _____

P.O. Address _____

County _____ Prov. _____

Grow Larger Crops Without Depleting Soil Fertility.

R. Robertson
Supt. Experimental Farm, Nappan, N. S.

Editor Maritime Farmer:—

That live stock is a postive essential to successful agriculture in the Maritime Provinces is the sincere belief of the writer. The successful growing of roughage crops necessary for their feed is postively of first importance,(i. e.: growing large enough crops per acre to leave a margin of profit on the market value of the crop over the actual cost of producing it). Personally, I am ready to admit that the margin of profit in live stock, no matter how necessary, is so small when all cost for feed, care, money invested, risk, etc., is honestly charged,as to leave verk little if any margin on the right side in a great many cases. Were it not for the fact that (to my mind at least) it is the best, if not the only practical way to keep the producing ability of our farms up to the standard required and at the same time produce a crop of some kind each year, it is just possible that I, like many others, would attempt to farm without live stock. But believing, as I do, that live stock is the corner stone of our successful agriculture, particularly in the Maritime Provinces, the raising of the fodder for our live stock is of the very greatest importance and this I am also prepared to admit is quite often done at a loss from carelessness in methods and following too closely some of the habits that may have been possible when the soil of the country was in its virgin state, but which from constant misuse, much of it is not in a state to return large enough yields per acre to leave any margin of profit.

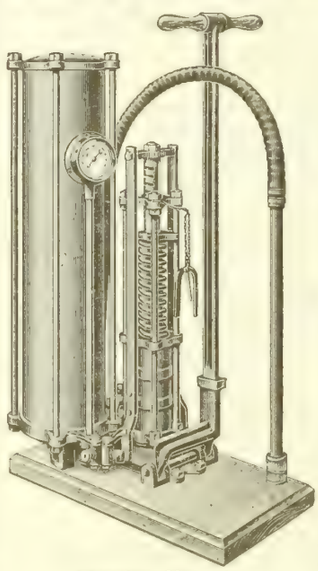
To my mind, a great deal more attention has to be given to what crops are to be grown, both with a view to growing the most suitable crops for stock food, and with a view to the getting of continuous valuable crops and at the same time keeping up the condition of the soil for the production of large crops. With this in view, clover, grown as often as possible in every rotation, is desirable both on account of its being one of our very best stock foods and from the fact that by the growing of this crop, the texture of the ground can be much improved while at the same time a valuable crop is produced.

The system which has been so far largely followed growing grain for a few years followed by timothy hay for as many more as it would give anything like a fair crop and often not large enough to pay for its actual cost, without allowing anything for deterioration in the producing state of the soil, can only end in one place, failure,. Believing this I would say, that were a carefully thought-out system of rotation of crops followed the produce of the country would well be increased 25 to 50 per cent. in but a few years.

Use the shortest rotation practicable for your local condition with one hoed crop, preferably turnips, in every rotation and using all the manure available and the necessary amount of cultivation and hoeing on this crop, and clover hay once, at least, in every rotation, cutting one crop only, at a time, with grain alternating always following either a hoed crop, or a clover crop the aftermath of which had been turned under. In preparing for this root, or hoed crop I would hope to have a clover sod, (not an old timothy or pure grain sod) plow it in the fall moderately shallow turning it well over, and possibly cultivating it once or twice. Cultivate well in the spring and spread the manure on the surface preferably with a manure spreader. Plow again somewhat deeper, and again cultivate thoroughly. Run into rows or drills from 26 to 28 inches apart, for either turnips or mangolds. Sow the turnips and mangolds in continuous rows. The planting of the seeds in bunches 1 foot apart, with from 3 to 6 seeds in each bunch is most desirable. This helps very much at thinning time, helps germination and enables you to select the very best plants and they will always be found in the right place, 1 foot apart. With the necessary amount of cultivating and hoeing, say three to four times through with the cultivator and twice with the hoe, you will not only do what is necessary to secure a paying crop of roots but you will incidentally be doing all the necessary preparation for the following grain crop, clean seed grain, but you will also have prepared the land for successful crops for the remainder of that rotation, which should never have a second crop of the same kind following each other. A 3 or 5 year rotation, is the most desirable, for successful agriculture in the Maritime Provinces, and that means prosperous times for all the people. Keep more live stock, pay greater attention to the growing of the foods, clover, roots especially turnips, and coarse grains, most suitable for their keep. Take care to have a short rotation in which there is always one hoed crop, and never twice the same crop in succession with an aftermath of clover turned under as often as possible. This, instead of getting the minimum crop return at the greatest cost to future fertility as is usually done, would result in maximum crops with increased fertility, which would enable us to grow paying crops. Prosperity does not come to the farmer from the amount of crops he raises, but from the amount of profit he has in the value of the crop over its cost and to have profit he must grow large crops, and keep on a-doing it.

R. ROBERTSON.
Nappan, N. S.

Magic Pump No. 9.



Magic No. 9.

The easiest running pump ever made. The wonder among spray pumps.

The pump for the orchard that is too large for a hand pump, and too small for a power pump.

The man who operates the Magic is working against **only half the pressure indicated on the gauge. The spring does the rest. One man can easily develop and maintain 125 pounds pressure.**

CHALLENGE POWER SPRAYER

Largest capacity and highest pressure of any outfit made. It will **spray 400 gallons an hour at 200 pounds pressure.**

LITTLE GIANT NO. 70

High Power - Large Capacity - Barrel Pump.

All pumps have porcelain lined cylinders, therefore are free from corrosion. No stuffing boxes. No leaking. No friction. All parts are very accessible. Built for **durabililty, efficiency and power.**

NIAGARA BRAND LIME-SULPHUR

will control **San Jose Scale, Oyster Shell Bark Louse, Blister Mite, Aphis, Bud Moth, Apple Scab, Canker, Leaf Curl and Potato Blight.**

It is not an **experiment.** It has become the **standard** of **spray value** everywhere. It is the **only absolutely reliable Lime-Sulphur spray, because it is made right.** It is a **permanent solution.** It is endorsed by all Experimental Stations and Agricultural Colleges. It is an **Insecticide** and **Fungicide. Always ready for use.** It is a **summer** and **winter spray.**

ARSENATE OF LEAD

will control **Codling Moth, Potato Bugs** and **all chewing insects.** It is preferable to Paris Green or any other poison. It **positively will not burn foliage. Rains will not wash it off. Mixes readily with water** and **stays mixed** with the **least amount of agitation.**

When **Niagara Sprays are used, clean and perfect fruit is assured.** This means **prices, profit and prosperity.** Write for our **Spray Book** and **prices.**

Niagara Sprays are also made by:

Niagara Brand Spray Co., Ltd., Burlington, Ont.

Niagara Sprayer Co., Middleport, N. Y.; Oregon Spray Co., Portland, Oregon; Bean Spray Pump Co., Cleveland, Ohio; Medford Spray Co., Medford, Oregon; Hood River Spray Mfg. Co., Hood River. Oregon.

Are They Afraid?

Twice this year we have publicly and widely made the following fair offer to manufacturers of common cream separators. We again repeat it.

If any maker of common cream separators will print the names and addresses of all persons who—for any reason whatever—exchanged Tubulars for his machine during 1909, we guarantee to print a list AT LEAST TEN TIMES AS LONG of those who discarded his class of machines for Tubulars during 1909.

No manufacturer has accepted this offer. Are they afraid? Is not their silence the best proof that Sharples Tubular Cream Separator sales exceed most, if not all, others combined—that Tubulars probably replace more common separators than any one maker of such machines sells? Could you ask any better reason for choosing the simple, sanitary, easy to clean Sharples Dairy Tubular—The World's best?

America's oldest separator concern. The manufacture of Tubulars is one of Canada's leading industries.

To oil the Dairy Tubular, pour a spoonful of oil into the gear case once or twice a week. Self oiling. No oil cups, tubes or holes.

Write for New Catalog No. 194

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

BAGPIPES

We're the largest Bagpipe dealers in North America.

Lawrie's famous make is the kind we sell.

Write today for

Free Catalog

We're from the Old Country ourselves and know all about the Pipes, Chanters, Bags, Reeds, etc., in big stock. Repairs promptly done. Write for catalog to-day.

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Raw Furs and Skins

WE ARE BUYERS

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RAW FURS and SKINS

We Guarantee Honest Assortment, Highest Market Prices and Quick returns.

WE PAY EXPRESS CHARGES

Send for our 1909-1910 PRICE LIST FREE

REVILLON FRERES

134 et 136 McGill St., Montreal.

Spraying.

There are four essentials in order to get good fruit, namely: cultivation, fertilization, pruning and spraying. The subject of spraying is receiving more attention each year and no orchardist can afford to neglect this important operation. Bordeaux mixture as a fungicide, with Paris Green or arsenate of Soda as an insecticide is universally used. Bordeaux mixture must be carefully prepared. To prepare 40 gallons of Bordeaux, take 4 pounds of Blue Vitriol and dissolve it in 20 gallons of water. Slake 4 or 6 pounds of stone lime in hot water and dilute to 20 gallons, Now pour these dilute solutions into the spray cask simultaneously if possible, or by using a pail, introduce first a pail of vitriol water then a pail of lime water until the two barrels are empty and the 40 gal. cask is full. Use a cheese cloth strainer when filling the spray cask. Keep the agitator in motion during the operation:

It is advisable when much spraying is to be done, to have the lime and vitriol prepared in a stock solution, this is done by dissolving say 20 lbs. of vitriol in 20 gal. of water in a cask and slaking 20 lbs. of lime in another cask in 20 gal. water, a gal. from either cask represents a pound of the ingredients used.

In order to do good work a proper pump with all the submerged parts of brass, must be used. The pump must be well packed, fitted with an indicator, 25 feet of 1-4 inch 6 ply hose, a 12 foot bamboo pole with single stem Mistral Jr. nozzle attached. The indicator is very useful to regulate the pressure. A pressure of 80 lbs. to the square inch is necessary to procure a fine spray which is necessary to procure an even distribution of the mixture.

Before beginning to spray add 1-2 pound of paris green or 1 quart of arsenate of soda to the 40 gals.

If paris green is used as an insecticide the mixture must be agitated before beginning to spray as the paris green settles down if undisturbed.

If the best results are anticipated four applications during the season are required.

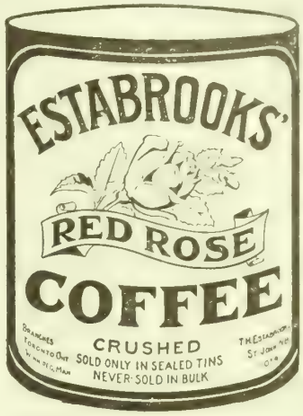
First, just as the buds begin to show green. Second, before the blossoms open. Third after the petals have fallen, and fourth, ten or 15 days later No fixed rule can be given, the orchardist must watch the trees and spray whenever circumstances demand Timeliness is very important. If the tiny apples are covered with bordeaux the spores of black spot cannot take effect. The spores of funguous diseases are in profusion on the trees ready to become active when weather conditions are favorable. Canker worms do their work when very small on the tender shoots. The worms and insects avoid the poison. The spray must be forced where the pests are in order to be effective, and many a man has been disappointed in the results of his spraying either because he was too late with the mixture or careless in the application. Both sides of the leaves require an application One thorough spraying which covers all parts of the tree is worth half a dozen careless applications, when the operator merely sprinkles the leaves.

Never neglect a single spraying even if the season seems favorable to the growth of clean fruit. We never can tell what will happen, and it does not pay to run any risks in this important matter. I have always used 4 pounds of blue vitriol to 40 gallons and very often 8 pounds of lime instead of 4. Lime never injures the bordeaux. The results have been most satisfactory. My fruit is always eagerly sought after by the speculators

Because spraying has been so much talked about during the past few years, I am afraid some few men are making the mistake of thinking that nothing

The new Crushed Coffee as compared with Ground Coffee

Merely to look at it you will see how very different it is; **Crushed** Coffee being in small even grains, totally free of chaff or skin while ground coffee has the appearance of being mashed; large and small grains with chaff or skin mixed together.



Red Rose **crushed** Coffee, being free of the chaff, can be made as easily as Red Rose Tea. Settles clear and bright. No egg or anything required. Just look at our **crushed** Coffee and see how correctly we describe it.

A good combination is Estabrooks' Coffee for breakfast and Red Rose Tea for other meals

Estabrooks'
RED ROSE
Coffee

ORDER A TIN IN TIME FOR BREAKFAST

15

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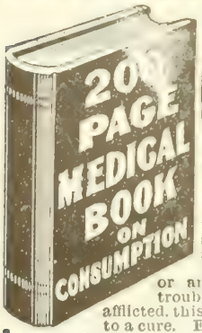

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1582 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

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BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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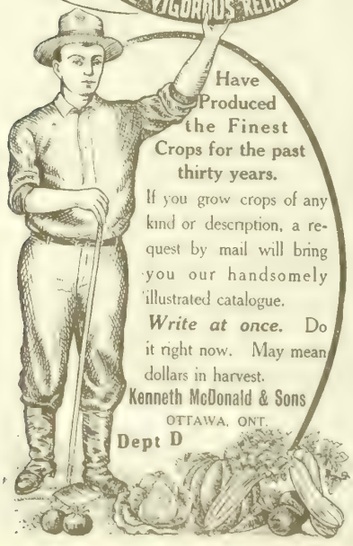
TRUE VIGOROUS RELIABLE



Have Produced the Finest Crops for the past thirty years.

If you grow crops of any kind or description, a request by mail will bring you our handsomely illustrated catalogue.

Write at once. Do it right now. May mean dollars in harvest.

Kenneth McDonald & Sons
OTTAWA, ONT.
Dept D

else is necessary to get a good crop, but unless the trees are carefully pruney, the land well cultivated until July 1 and sowed to vetches or clover, and a liberal application of stable manure, or a well balanced commercial fertilizer added early in the season, the results will not be satisfactory.

W. H. WOODWORTH,
Berwick, N. S

NOTE:—Mr. Woodworth's plan of diluting the chemicals to the full extent before uniting them shows the care he takes in preparing his mixture, and is all right. Many successful orchardists, however, claim satisfactory results when one of the constituents is first placed in the cask which is then nearly filled with water, the remaining ingredients being added diluted only to the extent of one or two pails.—This at least has the virtue of being rather less trouble.

A Wonderful Producer.

A Holstein cow owned by the Dairy Department of the University of Missouri in one year produced more human food in her milk than is contained in the complete carcasses of four steers weighing 1250 pounds each. This statement, impossible as it seems, is not only true; but does not even do full justice to the cow. The solids in the milk which are completely digested and used by the body are counted against the entire carcass of the steer which is only in part edible.

The cow that performed this feat of producing the equivalent of four steers is Princess Carlotta. In the year she produced 18,405 pounds of proteids, fat, sugar and ash containing milk. Below is given the amount proteids, fat, sugar and ash contained in this milk and the amount of the same substances found by Dr. P. F. Trowbridge in an analysis made of the carcass of a fat steer weighing 1250 pounds.

	18,405 lbs. milk	1250-lb. steer
Proteid	552 lbs.	172 lbs.
Fat	618 lbs.	333 lbs.
Sugar	920 lbs.	..... lbs.
Ash	128 lbs.	43 lbs.
Total	2218 lbs.	548 lbs.

The total amount of dry matter in the milk was 2218 pounds all of which is edible and digestible.

The steer, with a live weight of 1250 pounds, contained 56 per cent of water in the carcass leaving a total of 548 pounds of dry matter. In this dry matter of the steer is included hair, and hide, bones and tendons, organs of digestion and respiration; in fact, the entire animal, a considable portion of which is not edible. The analysis of the steer's carcass was made from samples taken after grinding up together one-half of the complete carcass and is not in any sense an estimation of the composition of the carcass.

Princess Carlotta produced proteids sufficient for more than three steers; nearly fat enough for two; ash enough to build the skeleton of three, and in addition, produced 920 pounds of milk sugar worth as much per pound for food as ordinary sugar.

These figures show the remarkable efficiency of the cow as a producer of human food. It is because of this economical use of food that the dairy cow and not the steer is kept on high-priced lands. When land is cheap and feed abundant the meat producing animals predominate, but when the land become high in value and feed expensive the farmer turns to the dairy cow.

C. H. ECKLES,
Professor Dairy Husbandry,
University of Missouri.

Empire Fertilizer Drills.

The question has often been asked: "What should a farmer expect of a Grain Drill?" Let us tell you what we would expect.

We have a perfect right to expect a Grain Drill that will correctly sow any seed we want to plant, and Fertilizer Feed that successfully handles all brands of commercial fertilizers in wide range of quantities. We have a right to expect a well made drill, free from a lot of fads, and so simple as to be readily understood. It should have furrow openers—Disk or Shoes—that open proper seed trenches and place the seed in the ground at an even depth without skips or bunching the seeds.

The Empire Drill has been on the market for more than half a century. If it was not right, the company that makes it would have been out of business long ago. There are many Empire Drills in use to-day that were purchased fifteen to thirty years ago, and their owners tell us that they are doing just as perfect work to-day as when new, and that they have not been forced to spend a fortune for repairs in order to keep them running.

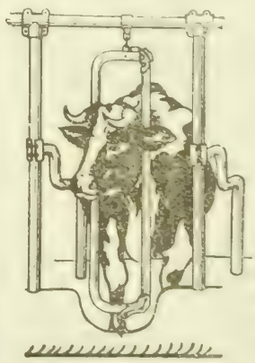
We want you to examine this Empire Drill for yourself. You are the judge as to whether or not it is what you want. Compare it with other drills, and we are sure you will give us your order.

Bligh & Prince, Agricultural Implements and Carriage Dealers, Truro, N. S.

Exclusive Agents in Nova Scotia for Empire Grain and Fertilizer Drills.

Are You Building a New Barn or Remodeling Your Old One?

If so write to-day for a copy of our new catalogue on Steel Stalls, Stanchions and Stable Plans. It is just off the press and contains the very latest ideas and suggestions from the Ontario Milk Commission Report, Agricultural Colleges and prominent dairymen. You cannot afford to miss this chance.



"BT" Steel Stalls and Stanchions will keep your cows clean and comfortable and your stable will be bright and sanitary They cost less and will last longer than any other kind of stabling.

Our Stanchions are made in five different sizes, ranging from five to nine inches in width.

WRITE

BEATTY BROS., - FERGUS, CAN.

Litter Carriers, Hay Carriers, etc.

Soiling Crops for Late Summer and Fall Feeding.

Editor Maritime Farmer:—

During the last few years, dairy farmers in general, have become convinced of the necessity of sowing some crop to cut and feed green, in the late summer and early fall, to keep up the milk flow when pastures are short.

We have been following this practice for many years. Perhaps the reason we started this practice before the average farmer was that we supply a city butter trade and, therefore, we had to keep up our supply or lose the trade. In growing our soiling crops, we take a piece of stubble land, work it well, and apply a light dressing of manure, or, if we have no manure to spare, which is often the case, as we have to manure from ten to twelve acres of hoe crop every year, we take a piece of sod land and cultivate it well, too get a good seed bed. Just here I might say that it is very important to have the piece of land in which you are going to sow your soiling crop, as near the barn as possible. You will have no time to go a long distance for your load of green feed, night and morning, in the busy harvest time. The mixture we sow is the following: Oats, four parts; peas, one part and vetches on part, sowed at the rate of about four bushels to the acre. This makes a very nice feed for the cows. We generally sow about three pieces of this mixture at about intervals of ten days between each seeding. By so doing we always manage to have our supply fresh and green. When starting to feed, we give the cows only a small amount at a time, as they will not eat very much at first, increasing the quantity gradually until they are eating all they will take twice daily. Some farmers feed their green feed by throwing it over the fence to the cows in the pasture. This is a very wasteful practice, and the boss cows get more than their share, while some do not get enough. We always feed our cows in the stable, which I think is the best plan. The feed should not be allowed to get too coarse before starting to cut; better to start early, even if you do not get as much feed. This mixture does very well, up to, say, the last of September, after which time the cows do not seem to relish it. So, to take its place, we grow about two acres of corn. We manure fairly heavy for corn on stubble land or well cultivated sod. We get a good heavy crop of fodder with fairly well developed ears. We feed this as we cut it, until the first frost touches it; then we cut and stook it all in the field and we have enough to feed up to the first of December The cows eat it almost as well dry as when green, and it saves the hay wonderfully. Every dairyman, worthy of the name, should grow soiling crops. They are paying crops, as they keep up the milk flow, at a mimum cost and labor and they can be fed off the land without the trouble of storing them away in the barn.

WM. CLARK.

North Wiltshire, P. E. I.

It's easy to thoroughly clean the Frictionless Empire

Beware of separators with complicated skimming devices. It's impossible to get into the corners and crevices of such devices and clean them thoroughly.

You cannot get cream in perfect condition—cream without a taint—from a separator that cannot be thoroughly cleaned.

The few, simple, smooth cones of the Frictionless Empire are as easily cleaned as a glass tumbler — and you can clean them just as thoroughly.

Cream separated by the Frictionless Empire is sweet and clean—first quality. It makes the finest butter you ever tasted.

Your ten-year-old daughter will enjoy turning the Frictionless Empire. So nearly frictionless it almost runs itself. Unless you stop it with our brake it will run for half an hour after you quit skimming. It's the only separator with ball bearings on both top and bottom of bowl-spindle.

Years of service prove their worth. Empire separators in constant use for ten to fifteen years have cost on the average only thirty cents per year for repairs. Samuel Gilmour of Rocklyn, Ontario, says he bought an Empire, 325 lb. machine, in 1896, and it has not cost him one cent for actual repairs. He has kept on an average 15 cows.

Some day you'll own an Empire. The sooner that day arrives the better for you. And whether you choose the Frictionless Empire (cone method) or the Empire Disc you are buying certain satisfaction. There's Empire Quality in each machine, and a binding guarantee as good as a gold bond.

Get our new 25c. book. It gives unbiased information about the cone and disc methods, which are the only two standard methods of cream separation. Contains many valuable dairy pointers. We will send you one copy free, provided you tell us the number of cows you keep. Also name of this publication. Send for this book immediately. Ask for book No. 36 Extra copies 25c. 3

The EMPIRE Line of Cream Separators

The Empire Cream Separator Company of Canada, Limited, Toronto, Ont. Winnipeg, Man. Sussex - N.B.

Fruit Growers

DO you want other fruit growers to tell you how,

NICO SOAP

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PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

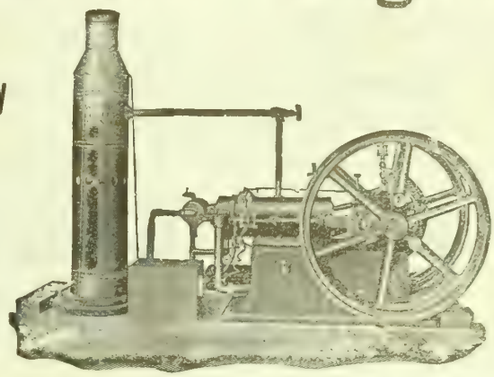
Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS., Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

Ideal Gas and Gasoline Engines.

Stationary and Mounted



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Windmills Power and Pumping.

Grain Grinders, Iron Pumps, Tanks, Water Boxes, STEEL, SAW Frames, Concrete Mixers.

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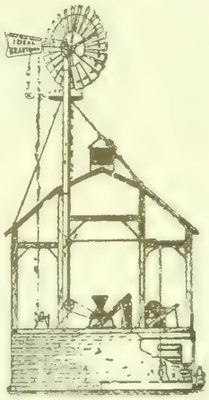

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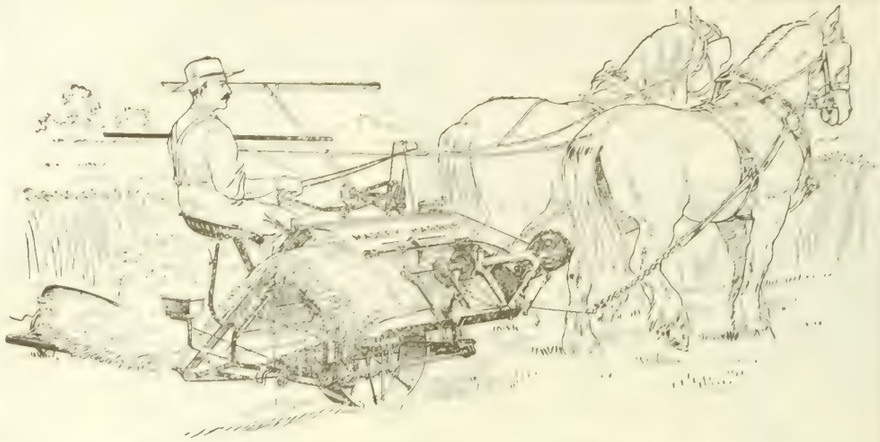
We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

Address—**MARITIME FARMER, Sussex, N. B.**



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Superior cutting mechanism.
Easily handled Reel.
Floating Elevator, front and rear.
Reliable Knotter.
Positive Drive.
Easily adjusted for varying conditions.
The Massey-Harris can be depended on every time---and all the time.

Massey-Harris Manure Spreader.

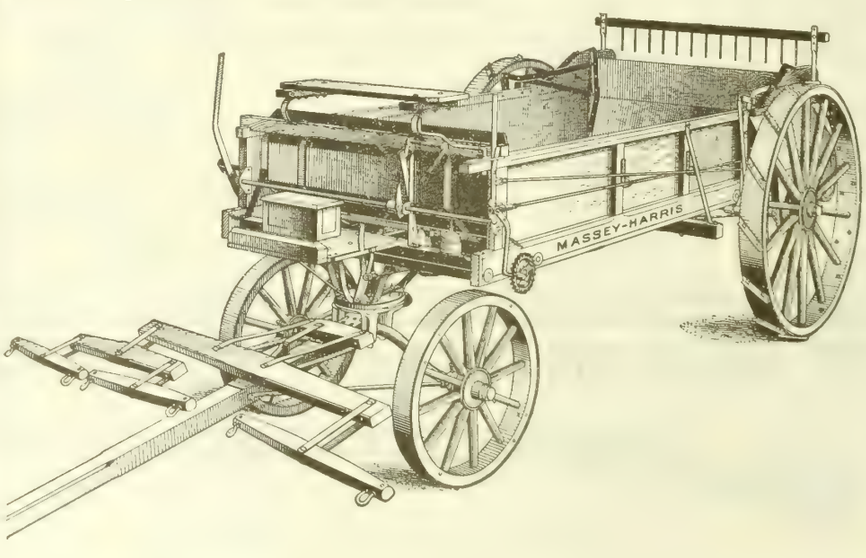
Built very Strong because it must carry heavy loads over ground that is often rough and frozen.

Has a Spiral beater which spreads the manure evenly.

It is simple and easy to operate so your boy can use it as well as you.

It is durable and will last a long time.

It is one of the most profitable **investments** you can make---not an expense.



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Binders, Reapers, Mowers, R
Tedders, Drag Harrows, Disc
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Massey-Harris Reaper

The only Reaper with a steel platform. The large drive wheel gives ample traction. Gears are well protected by shields. Will cut clean without digging into the ground. Pitman has steel strap at knife end and brass bushing at crank end. Driver has perfect control of the Rakes. Platform is easily raised and lowered.. Main wheel runs on Roller Bearings. Table is easily tilted by a convenient lever. Machine can be folded for transport easily and quickly.

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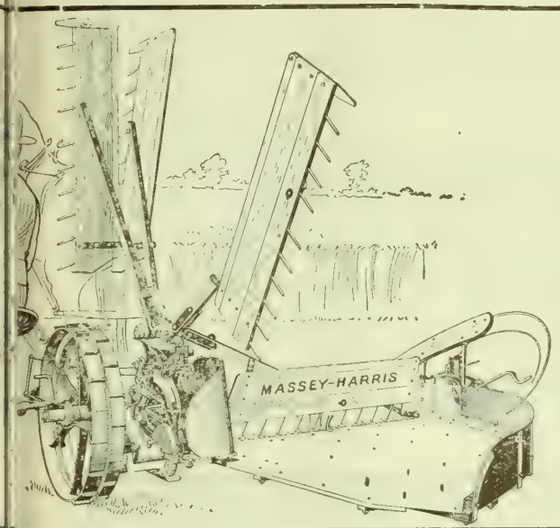

sey-Harris Cream Separator

mmer under all conditions---because it has ning surface and because of the uniform f the milk by the improved split wing.

Easy to Fill

cause of the low supply can

Easy to Turn

speeded up at centre of bowl, because of the ball bearings and because of the smooth running gears.

Easy to Clean

use everything is easy to get at.

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Stops the bowl quickly.

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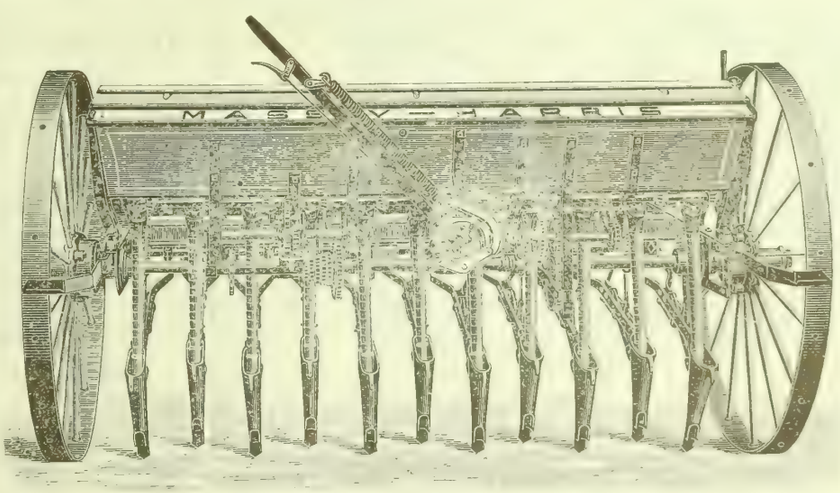
Large, broad-faced Drive Wheels.
Four-powl Ratchets---no lost motion.
Finger Bar and Knife back are finest rolled steel.
Long wearing Plates on cutter bar.
Steel Clips hold knife in position.
Sections have hard edge and soft centre.

Raised Ledger Plates give long cutting edges---the serrated edges add greatly to the cutting efficiency,

Massey-Harris Grain and Fertilizer Drill

Perfect and positive Force-Feed Grain Run and positive, rapid change Drive. Positive action, Star Feed Fertilizer Feed run with easy, quick and positive speed gear. Large and capacious Boxes, both for Grain and Fertilizer. Broad-faced Steel Driving Wheels. Extra large Cold Rolled Steel Axle. Heavy Steel Frame and Bed Rail. Flexible Spiral Spring Grain Tubes. Hoe bottoms or Disc Bottoms as desired, which can be used straight or zig-zag. Reliable Grass Seeder. Lifting and pressure controlled by one lever only. Spring Pressure, Spring Lift. Simple and reliable Land Surveyor.



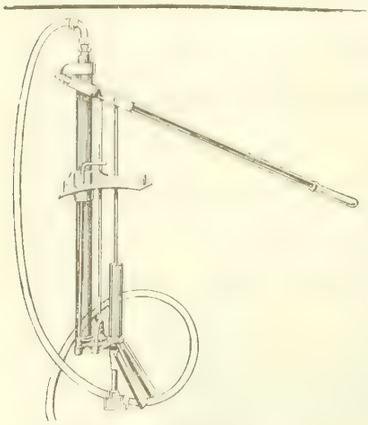
Could Not Sleep In The Dark.

Doctor Said Heart and Nerves Were Responsible.

There is many a man and woman tossing night after night upon a sleepless bed. Their eyes do not close in the sweet and refreshing repose that comes to those whose heart and nerves are right. Some constitutional disturbance, worry or disease has so debilitated and irritated the nervous system, that it cannot be quieted.

Mrs. Calvin Stark, Rossmore, Ont., writes:—"About two years ago I began to be troubled with a smothering sensation at night, when I would lie down. I got so bad I could not sleep in the dark, and would have to sit up and rub my limbs, they would become so numb. My doctor said my heart and nerves were responsible. I saw Milburn's Heart and Nerve Pills advertised and got a box to try them. I took three boxes and can now lie down and sleep without the light burning and can rest well. I can recommend them highly to all nervous and run down women."

Price 50 cents per box or 3 for $1.25 at all dealers, or mailed direct on receipt of price, by the T. Milburn Co., Limited, Toronto, Ont.



Another valuable feature in the

'Perfect' Spray Pumps

is the relief valve at the base of the air chamber. This valve is operated by the handle, which appears just above the plates, which fasten the pump to the barrel. This valve instantly drains the contents of the air chamber back into the barrel, which is valuable in a number of ways.

R. B. Westhaver, Mahone Bay, N. S.

Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—Q. R. S. T.

Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS.
Box 596 GEORGETOWN, Ontario.

The Havanna Potato Market.

Mr. E. S. Kirkpatrick, Trade Commissioner, writing under date of February 15th, says:—"An article on the potato trust in Havana and it's discrimination against New Brunswick produce, which appeared in a Canadian newspaper, has since been copied and republished very widely, not only in Canada and in the United States, but has even been reproduced as a translation in Spanish in a Havana daily. This article should never have appeared in print. It is entirely misleading and has been productive of considerable harm. That there is a potato trust in Havana, composed of five men, is not to be questioned, but that they are 'five millionaires' was never suspected. Probably none wre more surprised to read such a statement than the men composing the trust themselves.

"The contention that these men have discriminated against New Brunswick produce is entirely wrong as the facts of the case will show. Previous to the present season there has never been any steamship connection between St. John and Havana and consequently no New Brunswick produce came to the Havana market. It is true that the steamer Talisman made several trips last year from St. John, but the stock arrived in such poor condition that it gave St. John shippers an unfavourable reputation in this market.

SERIOUS RESULTS FROM ONE POR SHIPMENT.

"With the beginning of the present season and the establishment of a regular service, a St. John firm opened a produce warehouse in Havana in opposition to the trust and in their first shipment brought in 3,000 barrels of potatoes. These barrels were labelled in litograph 'Canada's Best Potatoes' and as the trust had honestly believed that New Brunswick stock was of poor quality they were curious to learn in what condition this stock arrived.

"The result of that shipment is pretty well known by this time to all produce dealers. The stock arrived in such rotten condition that the greater part of it was abandoned on the docks and remained there for two weeks until such a protest was made from residents of the neighborhood that the sanitary department of the city had it carried out to sea and dumped. This was a very poor advertisement in the Havana market, for every dealer in the city had seen the stock and believed it to be typical of New Brunswick produce. The fault lay entirely in the fact that the stock was too green when shipped and was diseased as well. This experience made it doubly hard to convince the buyers that New Brunswick had a good article to sell.

WHY THE TRUST BECAME HOSTILE.

"In spite of a loss of $6,000 on this shipment, the firm who were disappointed, ordered a second cargo which arrived a month later in excellent condition. It was readily sold, although not to the trust, who were still skeptical. As time went went on small buyers began asking for New Brunswick stock, and the trust became convinced that no better, if as good, produce was arriving from any point than that from New Brunswick. They then approached the Canadian firm who were doing business in Havana and offered to buy from them all stock they cared to import on the condition that this firm should not sell to any one else. However, they could not arrive at any agreement. Then it became a battle of interests. Potatoes have have not been sold in many years in Havana as low as during the present season. No matter what quota-

Did Your Potatoes Suffer Last Year From Wireworms?

There is no reason that they should this year. Use on your root crops

APTERITE

and **stop the leak!!!**

Apterite is a powder for the fumigation of the soil, and it will destroy all ground insects, thus insuring that your root crops when they germinate will mature into healthy plants.

Apterite

is the original soil fumigant and others are imitations. **Beware!!!** Ask us for our treatise on soil pests. Its free!!!

WM. COOPER & NEPHEWS,
TORONTO, - ONT.

The New Milk Calf Has Had His Day

High Priced Butter Has Put Him Down and Out

The Skim Milk Calf Has Come to Stay

and with Herbageum in his skim milk, he is fully equal to any **new milk calf.**

The Cream is Saved

by the use of one 50c package of Herbageum the cream from one and a quarter tons of skim milk can be saved.

If you want something better than any calf meal on the market try the following

100 lbs. Linseed Oil Cake Meal, say	$2.00
300 lbs. Fine Wheat Shorts, say	3.75
4 lbs. Herbageum	.50
1 lb. Salt	
405 lbs. at a cost of	$6.25

Not much over 1 1-2 cts. per lb.

Stir about two cup fulls in a gallon of scalding water and feed warm.

The Beaver Mfg. Co., Ltd.,
GALT, ONT. Sole Manufacturers

Send your name to-day for copy of this great

HORSE BOOK FREE

You want to know all about your horse. The book will post you. Tells of breeds, breeding, development, marketing; handling, treatment of diseases and ailments. A practical book that every farmer and horse-owner should have. We want to send you a copy. Simply write and ask for it. We pay the postage. You will find it worth many dollars to you in telling you how the old reliable stable remedy, Bickmore's Gall Cure, enables you to cure galls, cuts, sores, scratches and all ordinary horse wounds and ailments while you continue to work the horse. Never necessary to lay the horse off.

BICKMORE'S GALL CURE

is guaranteed to cure while horse is under harness or saddle. The great army of dealers who sell it are authorized to return your money if it fails. Buy it and have it on your stable shelf ready for emergencies. It is the standard remedy of leading horsemen, trainers, large stable owners and veterinarians. Sample Bickmore's Gall Cure sent for 6c postage. Address

WINGATE CHEMICAL CO., Ltd., Canadian Distributors,
810 Notre Dame St. W., Montreal, Canada.

Our 60 Years' Experience

and continued success is a guarantee to You of Good Quality and Fair Dealing.

We are offering for the next 30 days our No. 15 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. **If not satisfied we will refund the amount.**

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leathe blinds.
Breast Collar—Single strap.
Traces—1½ wide; heavy single strap lined at both ends; sewed to breast collar.
Saddle—2¾ in.. full padded; patent leather; swell skirts.
Breeching—Well made, with flaxseed stuffed cropper.
Reins—Cut from good leather.

H. HORTON & SON., Ltd.,
9 & 11 Market Square, St. John N. B

Free-Gold Expansion Bracelets.

We are giving a Gold Filled Expansion Bracelet free to everyone selling 8 boxes of Dr. Marcil's Famous Compound Pills at 25c a box. These pills are the greatest Remedy for the cure of Indigestion, Constipation, impure blood, liver and kidney diseases and all female weaknesses. With the pills we send ten articles of jewellery to give away with the pills, which helps you to sell. Send us your name and address and we will send you the pills, postpaid. When you have sold them, send us the money, $2.00, and we will send you a beautiful bracelet (it fits any wrist.) This bracelet is gold filled and will be a useful ornament to any Lady for many years. We are giving these valuable Bracelets to advertise our Remedies. This is a grand opportunity to secure a Bracelet free. Write to day.

The Dr. Marcil Medicine Co.,
Dept. "A," Toronto, Ont.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B

tion was made to a buyer by the St. John firm, the trust would quote a lower, but at the same time they, themselves, were paying about as much for potatoes as they had done at any time in the past.

"It is stated on good authority that the trust lost $30,000 in the month of December alone. But the fight was not against New Brunswick stock, but against one particular firm mentioned. At that time and and until the present, they have been buying New Brunswick potatoes in large quantities from other shippers. Probably 100,000 barrels have been shipped from St. John to Havana this season, of which the greater part has been purchased by the trust.

TRUST PURCHASES CANADIAN POTATOES ONLY.

"It is not to be denied that the price of potatoes in Havana is low, but this condition is entirely due to the excessive Canadian and United States crops. Maine potatoes are being quoted here now at a lower price than any from Canada, and yet notwithstanding this fact, the trust are buying almost solely from St. John and Halifax.

"Without the Havana market during the present season, the New Brunswick crop of potatoes would remained in the farmers' cellars, for there was absolutely no other market for them at any price. The Havana potato trust, instead of discriminating against New Brunswick, has bought stock from the New Brunswick shippers when they could have purchased for a lower price elsewhere.

"The trust, however, are a body of shrewd business men who have secured a good corner and mean to hold it if they can. It is urged that they are adopting no different course from that which any other body of men have adopted under similar conditions. The market might be considerably better if they were not in control, but it is too much of an undertaking for one firm to dislodge them from the position which they hold."

Are Hens Profitable?

Editor Maritime Farmer:—

The following should be sufficient proof that hens are profitable when properly handled.

In July, 1908, I purchased eight Barred Rock pullets. They began laying on October first and in the following twelve months layed 1,572 eggs or a fraction over 196 eggs each.

Three of them set in the spring of 1909 and raised thirty-one chicks.

The average price obtained for eggs during the year was 22 cents per dozen, thus making the 1,572 eggs or 131 dozen worth $25.82. The 31 chicks were worth at least 35 cents each, on October first, when they were five months old.

The total value of the chicks would then be $10.85, making the product of eight hens worth $36.67 while the cost of feeding hens and chicks was $15.36, leaving a total profit of $21.31 or a fraction over $2.66 per hen.

The hens were fed whole grain (wheat, oats and buckwheat) in litter, on the floor, in the morning; at noon, raw food, such as carrots apples, etc., and a mash at night.

Cut bone was also given three times a week. Lime, gravel and an abundant supply of water was before them at all times.

The above cost of feeding does not include scraps and skimmed milk from house or green food taken from the garden in summer, such as beet and mangel leaves, etc.

ALFRED CORBIN.
Kings Co., N. S.

You can Know how a Wire Fence Will Wear Before You Buy It

There is no reason why you should take anybody's "say-so" about a wire fence.

You can test it before you buy it.

We have a simple formula for testing wire which we will be glad to send you along with samples of our fence wire. You can compare it with any fence that is made.

Our Peerless Fence made from all No. 9 English wire, is equal to all emergencies. It has more than double the strength required. On account of the superior galvanizing on this wire, it should last more than twice as long as ordinary galvanized wire. It stands the salt, foggy climate of England for many years where ordinary galvanized wire rusts in as many months.

The Peerless Lock at each intersection of the crossbars is the most perfect device for the purpose yet produced.

This can't-slip lock grips the two wires firmly, yet permits the fence to adjust itself to any surface.

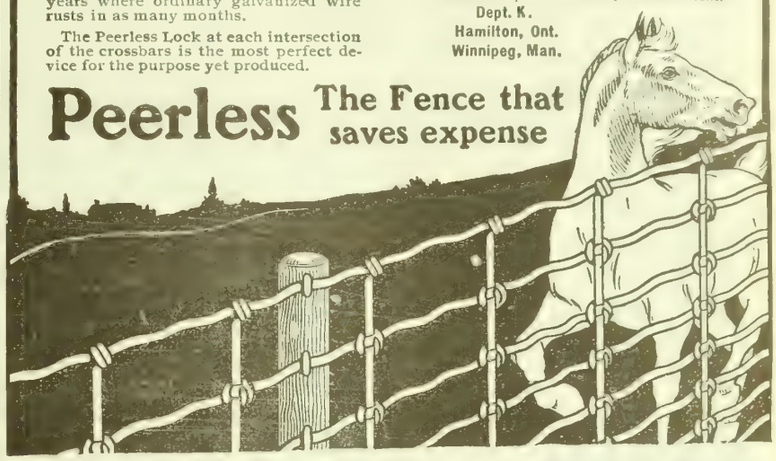
The Peerless Fence never sags, nor is it affected by changes of temperature. Its spring coil formation allows for all contraction and expansion, the wires always remaining perfectly taut.

Don't buy a fence till you know it will last and give satisfaction.

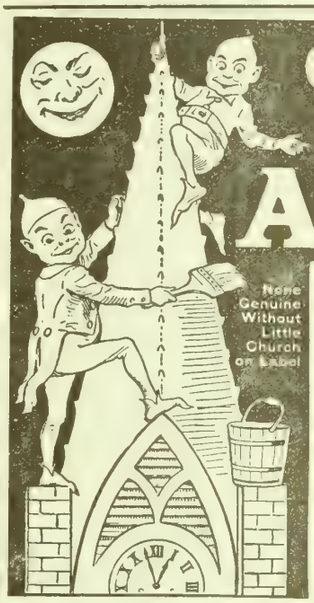
Write to-day for our formula and test samples of all makes of fence. Compare them with Peerless — we're not afraid.

THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
Makers of Farm, Lawn and Poultry Fences and Gates.
Dept. K.
Hamilton, Ont.
Winnipeg, Man.

Peerless The Fence that saves expense



CHURCH'S COLD WATER Alabastine



ALABASTINE is now the general vogue in cottage and mansion alike. Alabastine is more artistic and sanitary than Wall Paper, more effective than oil paint, more permanent than Kalsomine.

Alabastine is a dry powder, made from Albaster Rock. It comes in white and 21 tints. Alabastine is ready for use by mixing with cold water, and is applied with a flat bristled brush. Its colors are permanent, and do not rub off. Alabastine is a cement, and hardens with age. It can be recoated without removing the old coat.

FREE STENCILS

We have organized a Decorative Department, and will furnish FREE COLOR SCHEMES to all users of Alabastine. We also offer FREE STENCILS for producing the design we suggest. Write today.

THE ALABASTINE CO., LTD.
37 Willow St., Paris, Ont. 7

FREE **FREE**

This elegant watch, ladies' or gents' size, stem wind and set, fancy engraved cases, **fully guaranteed,** will be sent to you **ABSOLUTELY FREE,** if you will sell only $3.00 worth of **Lovely Picture Post Cards,** 6 for 10c. These are the most artistic, beautifully colored and embossed cards issued this season. **Views, Mottoes, Floral, Holiday, &c.** These are the fastest sellers. Get the best. Write to-day and we will send you a package. Sell them and return the money and win this **Handsome Little Watch.** You can also win a lovely **Tea Set FREE** if you will help us to enlarge our business by getting only 6 other agents and without having to sell any more goods.

COBALT GOLD PEN CO., Card Dept. 700 Toronto, Ont

The Unruly Member.

(By Marion Hartland.)

"CORA, Cora, will nothing cure you of your sinfullt careless habit of speech?"

"Auntie, auntie, will nothing cure you of your frightfully sober habit of speech?"

"Never, while assured, as I am now, that mine are the words of truth and soberness," rejoined the elder lady, with an emphasis that was somewhat severe, yet not un kind.

But Cora Manning only laughed—the sportive laugh of a disposition as sweet as heedless. Throwing herself upon the carpet at her aunt's feet, she folded her hands with a pretty affection of penitence, and looked up into the eyes which she knew could not meet hers without an answering smile.

"You are all primed for giving me a long, delicious scolding, I perceive, auntie, so I will not disappoint you. It will remind me of dear old times. Please define, however, in the outset, what is the precise nature of the habit you condemn by such an ugly name. Am I 'sinful' and 'careless' in grammar or composition, or do you object to the subject-matter of my 'speeches'?"

"You are an educated lady, Cora. This fact should be sufficient of itself to perserve you from inaccuracies in the structure of your sentences, and your style is generally graceful and pleasant."

"Good! There is one drop of sweet to reconcile me to swallowing the abundantly bitter dose which is to come."

"I wish that I could indeed make it so bitter as to be remembered," said Aunt Janet, with increasing gravity. "I should have more hope, then, that you would set yourself seriously to work to correct a great, and, I fear, a growing evil."

"I an getting very impatient, auntie," again interrupted the saucy girl. "As they say in public debates, 'Question! question!' "

"My first question is this, my dear: Do you recollect what was your solulation to Miss Healy as she broke up your confidential chat this morning—the talk you had devoutly hoped would not be spoiled by any third person, no matter how agreeable at most older times?"

"I cannot say that I do, ma'am; I hope it did not betray my real feelings too plainly. There is no need that I should inform her that, instead of classing her among the 'agreeables' aforesaid, I have set her down at the top of the first column in my list of 'bores.' Whatever I may have said in my intense vexation, she bears me no malice for my lack of politeness, for she sat with us two mortal hours."

"One and a quarter, Cora, by the clock," corrected Aunt Janet.

"It seemed to me to be nearer four,' said Cora; "and then she apologized elaborately for 'hurrying off before'—as she phrased it—'she had half talked out.' That is a pet saying of hers, by the way. The adage that 'half a loaf is better than no bread' does not hold good in this instance, I am sure."

"Yet you were at as much pains to convince her that she had paid a brief call as you were, at her entrance, to tell her that she was 'the very person of all your acquaintances who you were wishing would call upon Aunt Janet immediately.' "

"Did I say that? I am delighted, in raptures at my graciousness of hospitality—at a display of urbanity so independent of circumstances!" cried Cora, clapping her hands. "No wonder she stayed such an unmerciful length of time. How comfortable I must have made her feel!"

"And me as thoroughly uncomfortable," continued her Aunt Janet. "I have never regarded insincerity and falsehood as synonyms, although it appears that you do. But to proceed I thought you told me that Mr. Miller left town but two days ago?"

"So he did—on Tuesday."

"And that he made you a visit on Monday evening?"

Cora blushed slightly. "Of course! You do not suppose that he would have gone away without bidding me good-by?"

"If my memory serves me rightly you added, likewise, that you expected him back on tomorrow?" the inquisitor went on to say, in the same quiet, confident tone.

"Yes, ma'am, it was his intention, when he left, to return at that time, and"—dimples breaking over her cheeks—"I do not believe he will encounter any temptation potent enough to detain him longer in the country."

"Yet"—Aunt Janet spoke very slowly here—"when Miss Healy rallied you—coarsely, I allow—upon 'the cheerfulness with which you endured the absence of your handsome beau,' you protested that you 'had not seer him for an age—a week or more,' pretended ignorance of his departure for the country, avowed a like want of knowledge as to the probable period of his return, and finally, in reply to her inexcusably rude interrogatory,' Come, now, Cora, are you engaged to him or not? Everybody says that you are, and the wedding is to come off in the spring'—you said, promptly, and with seeming earnestness, 'Everybody is wrong, then, in this, as in many other things. Mr. Miller is a friend of mine; he never had been and never can be more, if I continue in my present frame of mind.' "

"Mercy, Aunt Janet, you make my blood run cold! You remind me of a judge summing up the evidence against one convicted of a capital crime—murder in the first degree—nothing less flagrant. Surely, you did not wish me to make a confidante of the most notorious tattler in the city, in sheer compassion for the poor woman, to gratify her overweening curiosity?"

"Far from it; but I would have preferred seeing you commit this indiscretion than hearing a deliberate falsehood from the lips of my bro-

SAVED FROM AN OPERATION

By Lydia E. Pinkham's Vegetable Compound

Belleriver, Que.—"Without Lydia E. Pinkham's Vegetable Compound I would not be alive. For five months I had painful and irregular periods and inflammation of the uterus. I suffered like a martyr and thought often of death. I consulted two doctors who could do nothing for me. I went to a hospital, and the best doctors said I must submit to an operation, because I had a tumor. I went back home much discouraged. One of my cousins advised me to take your Compound, as it had cured her. I did so and soon commenced to feel better, and my appetite came back with the first bottle. Now I feel no pain and am cured. Your remedy is deserving of praise."—Mrs. EMMA CHATEL, Valleyfield, Belleriver, Quebec.

Another Operation Avoided.

Adrian, Ga.—"I suffered untold misery from female troubles, and my doctor said an operation was my only chance, and I dreaded it almost as much as death. Lydia E. Pinkham's Vegetable Compound completely cured me without an operation."—LENA V. HENRY, R.F.D. 3.

Thirty years of unparalleled success confirms the power of Lydia E. Pinkham's Vegetable Compound to cure female diseases.

MODERN MARTYRS!

The age of martyrs is not passed. There are thousands of women all over the country enduring physical torture and mental anguish almost beyond description. They are not victims of persecution, like the martyrs of old; they are not called on to face the scaffold or the stake, but their sufferings—borne in silence and hidden from the world at large—are scarcely less intense.

These ladies, as a rule, are women and girls of refined and sensitive temperaments. Knowing that their sufferings are due to a disordered condition of the female functions, their native modesty deters them from seeking relief in the earlier stages; and when they do consult a physician, they usually get some drug mixture to take internally, which is not more effective for troubles of this kind than it would be for a toothache, a bruise, or any other strictly local ailment.

The seat of the trouble being in some one of the female organs, the remedy, to be effective, must act on this portion of the anatomy.

This is the secret of the success which always follows the use of ORANGE LILY in derangements of this kind. It is a strictly local treatment. It is absorbed directly into the parts that are inflamed and congested and its beneficent, soothing influence is noticeable from the start. The irritation of the delicate membrane is relieved, the congestion is overcome by the discharge of the watery matter which served to oppress the nerves and cause mental depression; the nerves are toned and invigorated, and the sunshine and joy of life again becomes part of her being. Read the following letters:

Archer, Ont., Feb. 1, '09.

Dear Mrs. Currah:—I received your kind letter some time ago, but was feeling so well, and not needing medicine, that I neglected replying sooner. I must say I have more confidence in ORANGE LILY than in any other thing I have ever used. Before I knew or found out anything about this medicine, I doctored away hundreds of dollars, and when I thought I was dying with inflammation of the womb, a box of ORANGE LILY was sent me through the mail from a friend. The first suppository I used I was greatly relieved, and in a few months completely cured. That was nine years ago this winter, so you can imagine with what esteem I hold the ORANGE LILY. I am thankful there is such a relief for poor, suffering women, for I have been one of them and can sympathize with others. Your sincere friend, MRS. NORMAN WEAVER.

Trenton, Ont., Dec. 4th, 1909

Mrs. F. E. Currah, Windsor, Ont.—

Dear Friend,—I feel it my duty to write you a testimonial as to what Orange Lily has done for me. Last winter I was feeling very miserable indeed. I could scarcely do my housework during my menstrual period, and for two months or more I was never free from pain in the womb and ovaries. The pain would run down the groin, so I would frequently nearly double up. Then the pain began going up the back of my neck to my brain until I hardly knew what I was doing at times. Life was a burden indeed. I finally could endure it no longer, so went to our leading town doctor and had an examination. He pronounced it (I forget the word) a rigid condition of the generative organs, produced by repeated attacks of inflammation. He said I would have to take a course of treatment, and if that failed to overcome the rigid condition I might, in time, be compelled to have the ovaries removed. I objected to that, so filled out Dr. Coonley's symptom blank and forwarded it to him, and he diagnosed the disease the same as my local doctor, so I decided to take Dr. Coonley's Treatment. I have used two jars of Cerate Massage, two packages of Herbal Womb Tonic and six boxes of Orange Lily. It is eight months since I began the treatment, but I feel like a new woman. I work right through everything now. Hardly know a pain, even during menstruation now. I often say, "I would not take $100 and be in the state that I was last March." I feel that Dr. Coonley's Home Treatment is a Godsend to suffering womankind, and shall continue to sound its praises whenever I have an opportunity.

Yours gratefully, MRS. T. H. HATTON.

ORANGE LILY as a remedy for these ills, as well as for leucorrhoea, painful periods, irregularities, cancers in their earlier stages, tumors, displacements, lacerations, and all ovarian troubles, has long since passed the experimental stage. So confident am I of this that I will send ten days' treatment, which is worth 35 cents, to any sufferer ABSOLUTELY FREE. The treatment is inexpensive, used at home, and no physician is necessary. Send at once for the

FREE TRIAL TREATMENT

which will demonstrate that ORANGE LILY will cure you. Enclose stamps, and address MRS. FRANCES E. CURRAH, WINDSOR, ONT., Can. Rep., Coonley Med. Inst.. Delays are dangerous. 11

$200 IN CASH And Numbers of Valuable Premiums GIVEN AWAY FREE

LPAPE	NREOGA	UPML
CPAHE	ROYREH	ERPA

Can you arrange the above [illegible] well known fruits. If so, you can share in the distribution of the above prize. [illegible] readily make out her list there. [illegible] One Hundred Dollars. [illegible] number the sum of Twenty [illegible] divided between them, [illegible] will have to be divided, [illegible] of [illegible] will be equally divided [illegible] a sentence [illegible] We do not want a cent of your money when you answer this advertisement. If you can find any of the names, write us today enclosing stamp for our reply. Do not delay. [illegible] one word under the first letter of each name.

Address, CANADIAN MEDICINE CO., Dept., H. Montreal, Que.

CHINESE STARCH

This is the kind of Starch you require to make Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c Per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address:

For Sale to the Trade by MESSRS. BAIRD & PETERS, St. John, N. B. OCEAN MILLS, - Mount Royal and Lasalle, - Montreal, Que.

ther's child, one whom I love as my own daughter."

Tears sprang to Cora's eyes. "I Aunt Janet? How can you talk so cruelly?"

"Judge for yourself, my dear. Every word we utter is either true or false. Bring your conversation of the past hour to this test, and how does it appear?"

"In love all things are fair," said Cora, gayly. "Everybody equivocates, or, if driven too hard, fibs outright, when—when situated as Horace and myself are."

" 'Everybody is wrong, then,' as I heard a sensible young friend of mine remark, not a month since. I understand and honor the delicacy which causes a woman to shrink from unveiling her heart-secrets to such prying meddlers as is this Miss Healy; still, I believe that a mild but dignified resolution not to gratify them would be a more effectual quietus to her inquiries than was the denial she evidently discredited, positively though it was uttered. I do not know your betrothed husband, but, if what you and others have told me of his character be correct, I doubt whether he would sanction the rule of lawful prevarication—'fibbing,' you term it—laid down by 'everybody,' and adopted by yourself."

"Horace has chosen me with his eyes open," returned Cora, a little resentfully. "To him, at least, I am no dissembler."

"Never be, my darling!" said the old lady. "You are too young and happy to understand how much of misery a single falsehood or the appearance of deception may bring upon those whose hearts and lives should be open as the day to one another."

With what sad experience of her own wedded life—ended years ago, by her husband's death—Aunt Janet was in rememberance, dealing, it does not now behoove us to inquire. Cora felt that self-reproach or an unforgotten sense of wrong received lent solemnity to the warning, and that further trifling on her part would be unkind. Gladly did she, for the first time in her life, hail the termination effected by other callers to a tete-a-tete interview with her favorite aunt.

To Mrs. Barrett, better known to her circle of associates as "Aunt Janet," has been committed the care of Cora during her mother's invalidism, a tedious spell of several years' continuance. The improved health of the latter, and the removal to another town of the more judicious and not less affectionate aunt, had subjected the girl to a different course of training. Of late years, Mrs. Barrett's visits at her brother's home had been short and infreuquent, and it was, therefore, with emotions of no ordinary pleasure that the family received her acceptance of their invitation to spend with them the winter which was to end Cora's singlehood. To the last mentioned member of the household the arrangement was frought with peculiar delight, if for no other reason than because it was to bring the realization of a cherished desire, viz., that her lover should see and appreciate her best beloved of friends, the foster-mother whom she never wearied of describing and extolling to him.

Cora had been universally admired since her debut in general society, two seasons before—adulation which had failed to impair the many domestic virtues that made her the pet of the home she now brightened, and fitted her, in most respects, to become the sun and centre of the more narrow sphere she ever adorned in Horace Miller's dreams of his future. Whether it were the warm breath of flattery, producing in the fertile soil the legitimate fruits of an undue ambition to shine and to please, that had brought to light less lovely traits and tendencies, defects that were grievous blots upon the otherwise fair page of character, or whether these had been more slowly developed under a somewhat loose family government, Mrs. Barrett could not decide. Her upright mind only detected and recoiled at the unlooked-for blemish, and love united with conscientiousness in urging her to do her utmost to check the noxious growth. Her rebuke was taken as kindly as it was given. Aunt Janet sighed as she caught herself almost wishing that her adopted child's temper was less even and sunny, at least that her nature were less mercurial, so evident was it that, an hour after such grave admonitions had been pressed upon her consideration, not a rankling recollection of what had transpired remained to disturb her enjoyment of the day's employments and recreations.

(Continued next issue.)

How often do you eat this food?

A short time ago there appeared in the columns of one of the prominent magazines an article on building brain and muscle by the proper selection of the foods you eat.

A good many people were surprised to find oatmeal placed at the top of the list of foods recommended; but if the article had appeared in an English or Scotch paper every reader would have expected to see first place given to good oatmeal.

As a matter of fact Great Britian and Europe come to us for tremendous quantities of Quaker Oats because it represents to them perfect food, being the richest in flavor and best in cleanliness and purity, of all oatmeals.

Americans should eat more Quaker Oats; the results would soon show themselves in improved conditions of health and strength.

For Spraying

Fruit Trees, Shrubs, Bushes and Plants, there's nothing to equal

EUREKA
COMPRESSED AIR, FOUNTAIN
SPRAYER

Requires but one pumping to empty entire contents of tank. Automatic lever valve stops flow of liquid while going from one plant to another. Easy, light, compact; tested to stand 5 times the pressure required to expel liquid. Two nozzles, with hose attachment for spraying small trees. Write for catalogue.

THE EUREKA PLANTER CO. Limited, - Woodstock, Ont.

House Cleaning and Tree Planting.

Editor Maritime Farmer:—

House cleaning time is again at hand. The time when we must wage war on dust and micmicrobes, with broom and dust cap, hot water and disinfectants. Every woman dreads it more or less because it means hard work and drudgery. It is something you cannot simplify very much, and you have of necessity, to go through the same routine year after year.

At the cleaning season last year I was ill, and with the incapable help that I had, wondered how I should ever clean a house of eighteen rooms and live. I thought about it, puzzled over it for days, and at last mapped out a sort of a system. Am going to tell what I did, and if one idea is given, I shall not have written in vain.

Before doing anything at cleaning, I made six good sized laundry bags. These were labelled White Cotton Scraps, Prints, Yarn, Silk and Velvet Scraps, Cloth, Rags. Then we began in the attic, sorted out the different things that were any good and put them in their respective bags. It was astonishing what I found tucked away there of no value whatever—old shoes, old clothing, cracked dishes, broken chairs past all usefulness, and numerous other articles that cluttered up the place and made a nest for moths. These were all piled in large baskets, carried to a suitable place and burned. At the close of day we had a nice clean attic systematically arranged, and as I cast my eye out the window on the bone pile, wondered why I had been storing such useless things.

Then before I began at the bed rooms we cleaned bureau drawers putting all scraps in their proper place. Next the closets, doing likewise. In each place we found many things that needed to be consigned. After this one bed room at a time was cleaned and settled to a finish until the whole upstair was done. We took down a lot of old pictures and bric-a-bac that were out of date and piled them up with the rubbish. Our rooms looked so clean and cool when done, it was a pleasure to look over them, and "tired nature's sweet restorer, balmy sleep" was all the more refreshing because we were brought to our resting bed weary and content.

Before starting in down stairs I took a week's rest. It is a great mistake for women to clean from six in the morning till six and sometimes after at night. It is too strenuous, it wears you out, destroys your nerves and ruins your temper.

After my weeks rest, I began with renewed ambition, cleaning first the drawing room, then the libary and so on through to the shed, but at no time overworking. The world was not made in day, and if we live there is plenty of time to do our work without abusing the temples God has given us. If we die, there are others to take up our work just where we left off. When carpets had to be taken up I found it a good plan to draw the tacks out after tea, next morning, before the men went to work, they lifted them, and cleaned them generally, they also helped to put them down. Now that I had gotten my house thoroughly cleaned, neither

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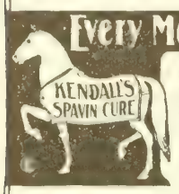
It leave no scars or white hairs because **it does not blister.**

Every Medicine Shelf



should have a bottle of Kendall's Spavin Cure — the best liniment in the world for man and beast. No telling when you will need it. Get it now and you will have the right remedy when the emergency arises.

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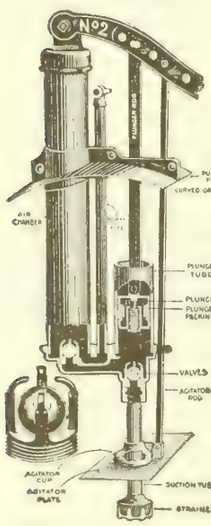

Mr. Leigh, Supt., put on the N Y. C. Stock Yards, Buffalo, N. Y., 40 tons (80,000 lbs) of Cold Water Paint with these wonderful Hand Machines. In this event the Spramotor has proven its value. A demonstration like this is more convincing than a bookful of arguments The Spramotor is guaranteed for a year. In all sizes for Orchard, Potatoes, Painting, White washing Vineyard and Weed destruction. Say what you want it for. This ad. will not appear in this paper again; if interested write now.

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front nor back yard looked in keeping with the inside, this I told my husband, after some hesitation he consented to let me have help to clean them up. We tackled the back yard first, Oh ye Gods! what a conglomerated mess: There was a pile of sawdust from the wood sawing last year, old sleds, old iron, big chunks of wood, an old horse rake, chips, broken potato barrels—in fact it was a typical out of date farmers yard. We got a team and it did not take long for all hands to clean this off. Then the maid, the children and myself raked it nice and clean, it was hard work, but felt well repaid when done. Around the kitchen verandah we set out a number of good size hop vines. They grew well, and by August were a beautiful green mass. A little further out in a suitable place we set six fir trees, all as near the same age as we could get. After a few more touches I felt that order had come of chaos and my little girl said it looked liked a Ladies' Home Journal yard. Needless to say I was tired and had to take another week's rest, but all the time was planning what could be done with the front yard. Here the outlook was not so discouraging. Our house was built on a flat and the front was always green in summer.

So we laid off a good sized square enclosing it with fir trees. We like the fir because it is nice and green all the year and it is also a clean tree. We have no front verandah, so I planted the five fingered ivy all around the front door and windows. These trees and vines had to be watered twice a day—morning and evening and we were rewarded by seeing the vines all grow and all the trees but three, which we will replace this year. My little boys thought they would like a summer house in one corner. This they built, it was not a masterpiece by any means, but the work was done by willing hands and a desire to help. We planted ivy all around it, so that in a short time nothing will be seen of the crude structure. Another thing the children did that I thought was pretty—they made three circles of common field stone, one foot high and three in diameter, filled with good earth and planted with nasturtions. The stones seemed to draw the heat, and they grew beautifully, supplying flowers for our table all summer. By this time it was getting late, so we decided to do no more that year. It was wonderful the improvement it had made in our place. My husband said it enhanced the value $500. What pleased me most was the interest the children took in this affair. Think ye, years hence, when they have left the old nest to do for themselves they will ever forget this tree planting? Never. They will love the memory of it because they and mother, planted them, watered them, and watched them grow. If we old people are left sad and lonely on the farm, can we not blame ourselves to some extent? Have we tried to make the farm home as pleasant and up to date as we might? Have we given the boys and girls something of their own to interest them—have we given them occasional pleasure instead of all grind? Do they get their holidays as in other business? Let us begin a new era and educate our boys and girls to stay on the farm instead of driving them away with so much of the ordinary humdrum of life. There is peace, plenty and happiness for the industrious, and money too for all the necessaries and pleasures of life. Don't be in a hurry to leave the old farm boys, it is far ahead of a dingy rent in a big city where your salary is just enough to eke out an economical living.

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Carleton Co., N. B.

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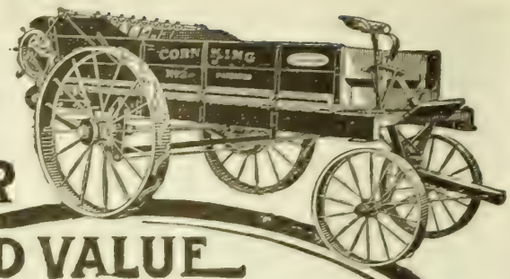

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GOOD MANURE SPREADERS are now so generally recognized as big money makers, time and labor savers, that the demand has grown by leaps and bounds. The result is that the market has become flooded with spreaders of slipshod quality. Therefore don't be influenced by extravagant claims when choosing your spreader. Look to the actual construction, the materials, the practical points of strength and operation. Look to the experience, equipment and standing of the manufacturer.

I H C Spreaders

Corn King **Cloverleaf**

These spreaders of the I H C line have proved their value in actual operation in the hands of satisfied farmers everywhere. The 1910 patterns represent the development of study, experience and practical use. Their strength to withstand the hardest strains, their sure, steady, simple operation, their light draft—these features have been tested by us as well as by the farming world and found right.

Don't delay the day of realizing on the full value of every bushel of manure. Get a spreader now—and choose carefully. Buy the spreader of proved value—of uniform high quality. Buy the spreader that is built on the right principle, of the finest materials, by the highest class of skilled workmen, in the best manure spreader works in the world. If you do that, you will get an I H C. No other spreaders have ever done the work as well, as quickly or as easily as the I H C line. For no others are so good on any point of construction. You owe it to yourself to investigate the I H C spreader that meets your needs.

I H C spreaders are made in various sizes, from 30 bushels to 70 bushels capacity, and there is a style and size for every section and condition. Choose to suit your special requirements from the only complete line. Large spreaders for big operations—spreaders for orchards, vineyards—in fact, for every condition.

It will be of considerable advantage to you to call on our local agent for catalogues and full information, or write the International Harvester Company of America at nearest branch house for these today.

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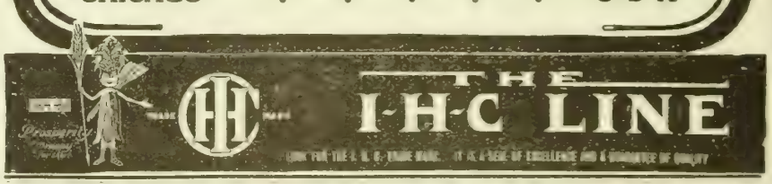

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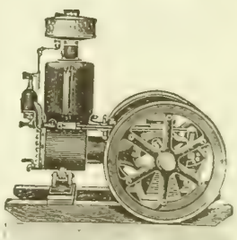

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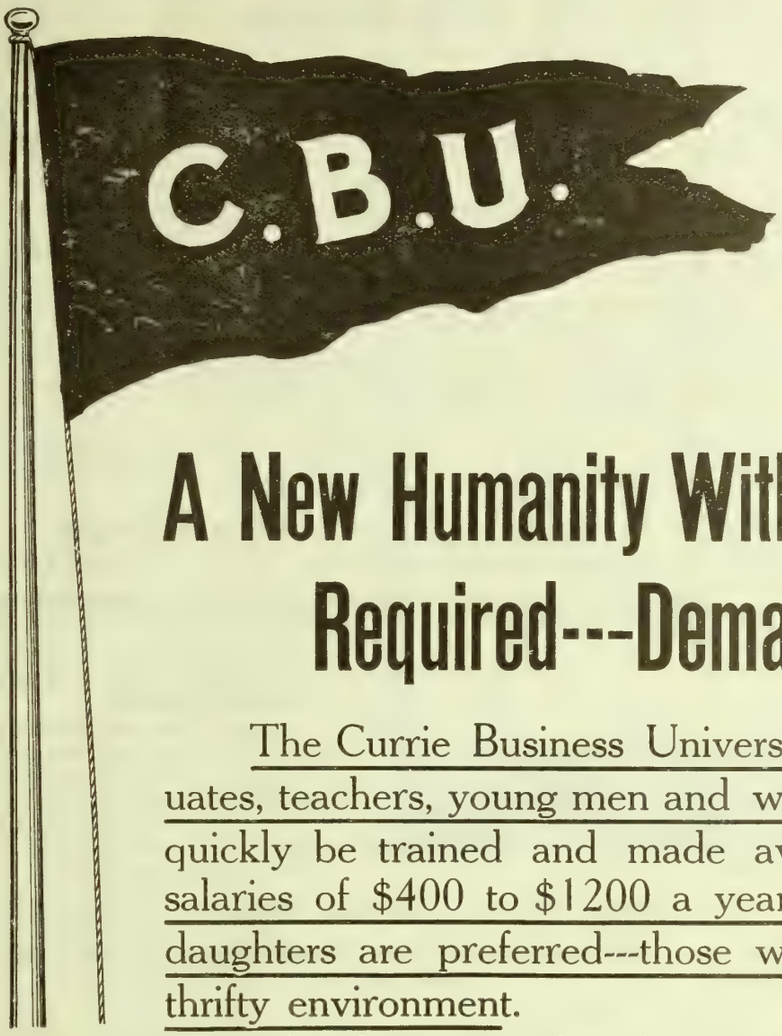

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THE CURRIE BUSINESS UNIVERSITY Ltd., St. John, N. B.

To the Secretary of the Currie Business University, Ltd., St. John, N. B.

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Our "Louis Grand" and "Baby Grand" are the consummation of piano excellence.

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Send us your name and address, and we will mail you our new catalogues, giving illustrations and full descriptions of New Scale Williams Grand and Upright Pianos.

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The old standby for all who have stock liable to stray; to question of identification, or disputes as to ownership; for keeping a record of flock or herd, and for general convenience. Do not be without them. Send your name and address for free circular and sample; it is no trouble, and may save you much F. G. JAMES, Bowmanville, Ont.

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Summer Care of Sick Babies.

The following circular was prepared for use in connection with Infants' Milk Depot Work by the "Conference on the Summer Care of Babies," representing the Departments of Health and of Education, and fifty hospitals, dispensaries, settlements, and other agencies in New York:

4,500 Babies died in New York City last summer from diarrhoeal diseases. Most of them died because Most of them died because they were given improper food. They could have been saved if they had been taken to the doctor at the beginning of their illness, and had been properly fed.

In hot weather, two or three loose movements a day, even though the baby seems to be well, may indicate the beginning of serious illness; a doctor should see the baby at once. Remember that it is far easier to keep the baby well than to cure it when sick.

The baby is sick when it vomits or has diarrhoea, and it is seriously sick when it has several loose green passages a day containing mucus and curds. Improper food is the cause of such illness; therefore stop all food, give cool boiled water and take the baby to a doctor at once. In summer it is dangeraus to wait.

Breast-fed babies often vomit or have diarrhea because the mother is sick or tired out and her milk is poor.

Improper food Irregular meals Lack of rest and sleep Too frequent or too prolonged nursing	weaken the mother and injure her milk.

These causes act especially in hot weather.

Nursing mothers should therefore keep themselves well and their milk in good condition, by eating at reglar hours, three plain, well-cooked meals a day, and they should drink water between meals. They should nurse the baby at regular hours. They should keep their bowels regular; constipation in a nursing mother often causes colic in her baby. Qarge quantities of tea, coffee and beer do not improve the quality of a mother's milk and may be injurious to her baby. So long as the mother keeps well the baby will be well.

If the mother is ill or "run down" or the baby has diarrhoea and vomiting, she should consult a doctor at once before the baby other foods or bottle-feeding. The quality of the mother's milk may be improved by improving her health.

Bottle-fed babies often have diarrhoea and vomiting because the milk used is bad and old, or the feeding are not properly prepared or properly kept, or the nursing-bottles and nipples are dirty.

Bottle-fed babies must be given only good milk which is kept constantly covered and on ice. Use milk furnished by the milk depots or diet kitchens; if the milk stations are not convenient, get good bottled milk which is delivered every morning. If the milk cannot be kept properly cooled it should be boiled as soon as received.

Prepare the feedings for the baby exactly as the doctor directs. Feed the baby at regular hours. Each feeding should be heated to a proper temperature in the nursing bottle before it is given to the baby. Taste a spoonful of the milk immediately before giving it to the baby to be sure that it has not soured. If the milk is not sweet do not give it to the baby.

As soon as the bottle used by the baby is empty it should be thoroughly washed with cold water, then cleansed with borax and hot water

VANCO Lime Sulphur Solution

(Made in Canada)

Lime Sulphur Solution has absolutely proved its efficiency as a fungicide and destroyer of parasites on trees and vegetables.

"VANCO" Lime Sulphur Solution is the best form in which you can get this valuable spray.

"VANCO" has more sulphur in solution, gallon for gallon, than any other preparation, and is consequently more effective.

"VANCO" is uniform in quality, so you can always depend on it.

"VANCO" Lime Sulphur Solution contains no sediment. Every ounce is active material, and there is no sludge to clog the nozzles.

One barrel makes 12 for spring, or 50 for summer spray. $8.00 per bbl. f. o. b. Toronto.

"VANCO" Lead Arsenate

is the surest and safest spray for all leaf-eating insects. It kills more certainly than Paris Green, sprays easier, sticks better, and never burns the foliage. Contains 15% to 16% Arsenic Oxide.

10c. to 13c. per lb. according to quantity.

We introduce the idea of High Quality at Lowest Price. "VANCO" Spray Chemicals are prepared by practical men, and have successfully passed Government analyses and practical tests.

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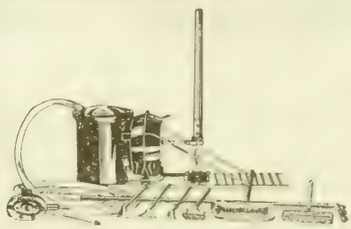

Housecleaning made a delightful undertaking, with a **Perfect Vacuum Cleaner.**

Rugs, carpets, furniture, bedding, etc., thoroughly and quickly cleaned, without being disturbed.—A cleaner that is light, strong, simple in construction, effective and easily cleaned, and has a blower attachment.

Hand Power $25.00 Water Motor $35.00 A. C. Electric $70.00

McKuen's Perfect Combined Washing Machine and Boiler

A PERFECT Washing machine. The latest on the market, "1910"; one that will do the washing right on the stove, while the clothes are boiling, no rubbing, no rinsing, no damage to the most delicate fabric, producing cleaner and much whiter clothes. A complete surprise to everybody.

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Purely Canadian. Patented bothhere and in United States.
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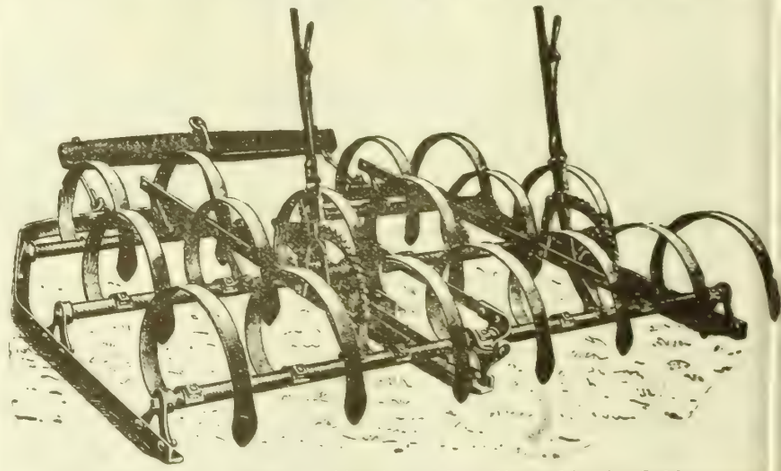
Lever Spring Tooth Harrows



The finest harrow made. Teeth can be adjusted in the field to any depth, and work regulated as required. Saves largely on labor and does more effective work than any Harrow on the market. Highly recommended by progressive farmers who have them in use.

——MADE BY——

Bailey-Underwood Co., Ltd., New Glasgow, N. S.

(teaspoonful of borax to a pint of water). The empty bottles should be put upside down on a shelf. The bottles should be boiled just before filling for the next feeding. The nipple should be thoroughly washed after each nursing with hot water, and when not in use should soak in borax water in a covered glass; the nipple must be rinsed in boiling water just before the baby uses it.

Clothing.—During the very hot days, or if the baby has fever, remove nearly all the clothing. A muslin slip or gauze shirt is enough. A baby with fever will not catch cold.

Bathing.—A baby should have one tub bath every day; on very warm days from two to four eneral spongings with cool water. If the baby has fever sponge it with cool water every two or three hours and place cool, wet cloths on its head.

Fresh Air.—Babies, sick or well, must have fresh air. Keep the baby in the largest, coolest room in the house or apartment. Keep as little fire as possible Keep the rooms free from garbage, soiled clothes and rubbish. Leave the windows open day and night. Avoid the sun on hot days. Select the shady side of the street and the shade of the parks, recreation piers and roofs.

Sleep and Quiet.—Keep the baby quiet. Let it sleep alone and let it sleep as much as possible. Lay it on a firm bed, not on feather pillows. Keep the baby and bedclothes clean. Change the diaper and bedclothes as soon as soiled, and sponge the baby with a soft cloth and cool water. If this is done the baby will not be so restless and will sleek better. Do not give "soothing syrup" to make the baby quiet, and do not let the baby hang on the nipple or suck a "baby comforter."

Diapers.—Diapers should be carefully washed as soon as they become soiled, and then dried in the open air. Do not use a soiled diaper a second time before washing it.

Echoes from the Winter Poultry Shows.

Editor Maritime Farmer:—

I had the pleasure of going to New Brunswick twice this winter, in the capacity of judge at two of your poultry shows. The first occasion was for the show held at Moncton, in the second week of January, and the second for the show held at St. John, in the latter part of February.

We, in Ontario, have always been inclined to look on Poultry Culture in the Maritime Provinces, as one of the much neglected branches of agriculture. That we will soon have ito reconstruct our ideas, was made very plain to me on these trips. The amount of enthusiasm displayed at these two shows, coupled with the fact that, the New Brunswick government is taking up the work of poultry education, points to a rapid change in the poultry situation. The breeders will do their part; and let the government show the farmers of the provinces the amount of profit that can be made by keeping a flock of good fowl, and they will readily take up the work. With the Montreal markets, the best in Canada, within easy reach, where eggs sell for about sixty cents a dozen in winter, and dressed fowl at about twenty-five cents a pound, it should not be hard to convince the farmers, of the profit of the business, if the matter is just laid before them in the proper light.

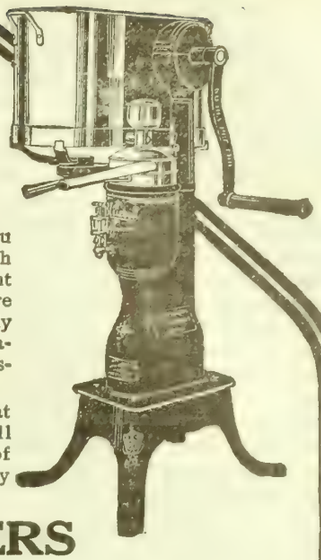
At Moncton, I found a show consisting of 854 entries. The heavy classes being the Barred Plymouth Rocks and White Wyandottes. The Leghorn classes were also well filled, and the quality was kery fair. Mr. Jackson, the president, and Mr. Seaman, the secretary, together with their assistants, deserve great praise for the way they worked this show up. My old friend, Mr. A. G. Gilbert, of the poultry department, at the Central Experimental Farm, dropped in for a few hours, and gave those present a short talk on poultry matters which was much appreciated.

At St. John, I found a show smaller in point of entries, but most of the birds shown had been "tried out" at the earlier shows, so the quality was fairly good throughout. While it was a disadvantage from the standpoint of attendance, having the show held on the third floor, it was not in the matter of light. The room was nice and bright all day long, and as the coops were not piled too high, it left a chance for the free passage of the light. The show was conducted in a very satisfactory manner, everything being kept nice and clean during the whole time. I was down the night before the opening, and it was a pleasure to see the way the members worked, everyone cheerful and willing to help, so that everything went along smoothly. The Barred Plymouth Rocks, White and Brown Leghorns and Black Minorcas were the heavy classes and contained some good birds. There were also some nice ones shown in White Rocks and White Orpingtons, an Indian game cock, with grand color but lacking a little in shape; a good S. C. R. I. Red cockerel and also a fair pullet of the same breed, a good White Wyandotte hen and nice Silvers. In Golden Wyandottes the winning cock, and the three winning pullets, deserved special mention. Taking it all in all, the show was a decided success, and the secretary, Mr. Bain, and the rest of the association, are to be congratulated on the way it was managed.

I wish to take this opportunity to thank the officers and exhibitors of both these shows, for the courteous treatment which was accorded me while in New Brunswick, and hope that at some future time, I will be able to renew acquaintances with them. The enthusiam displayed at these shows speaks well for future shows held in the province.

GEORGE ROBERTSON.
Poultry Judge, Ottawa.

THE WAY TO GET FULL VALUE
From Every Pail of Milk With Least Labor



YOU are not making all the money you could make out of the cows you keep unless you use an I H C Cream Harvester. You know how much butter fat you lose if you skim the old-fashioned way—from 20 per cent to 40 per cent—not to mention the time and labor wasted. Such methods are out of the question for the farmer with the 1910 spirit of progress. It is equally poor business to use a cheap, out-of-date or makeshift separator. Such machines are hard to clean, hard to turn, last but a short time, never give satisfaction, are never worth the price.

The money-making dairyman is the man who invests in a separator that will skim to a trace; that is simple enough to be kept perfectly sweet at all times, so he gets quality cream; one that turns easily—so that any member of the family may skim without effort; one that will do the work day in and day out, year after year. For such a separator choose one of the

I H C CREAM HARVESTERS

Be sure to investigate these machines before you consider buying any other make at any price. That is all we ask. You don't need to be an expert to see that the design and construction of an I H C is more simple and practical than any other. The only one with dust and milk-proof gearing; most perfect straining device insuring pure cream and skim milk; frame entirely protected from wear by bronze bushings at all points; has largest shafts, bushings and bearings; simplest, surest, most economical oiling arrangement; flexible top bearing prevents vibration and keeps bowl steadied, no matter if power is unevenly applied; many other features equally superior to all other separators.

I H C Cream Harvesters are made in two styles—the Bluebell, gear drive—the Dairymaid, chain drive. Four sizes in each style. No matter how few or how many cows you keep, we can meet your requirements. See the International local agent; or write International Harvester Company of America at nearest branch house for catalogue and full information.

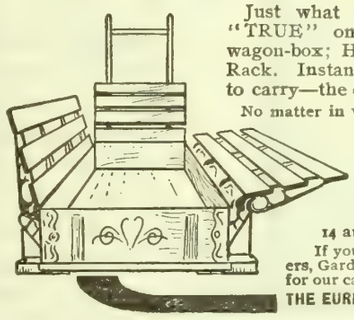
CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

THE I-H-C LINE

LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
CHICAGO :: :: USA

"TRUE" COMBINATION WAGON BOX AND RACK



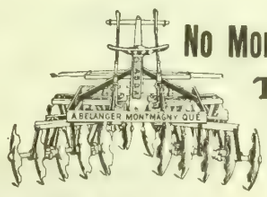
Just what every farmer needs. With the "TRUE" on his wagon he has a first-class wagon-box; Hay, Stock, Corn, Wood or Poultry Rack. Instantly adjusted for any load you want to carry—the only tools you need are your hands.

No matter in what position you put the wings, it is impossible for them to get out of that position, but it would take you but an instant to change them.

We guarantee this article to be made of nothing but the best of material—Yellow Pine, Hardwood and Malleable Iron—and to carry two tons in any position. Made in 14 and 16-ft. lengths and 38, 40 and 42-inch widths.

If you need anything in the line of Planters, Seeders, Garden Drills and Cultivators, Sprayers, etc., write for our catalogue. We have dealers in your town. 3

THE EUREKA PLANTER CO., Limited - Woodstock, Ont.



No More Use For a Plow!
The Double Action Cutaway Disc Harrow

Quickly reduces tough stubble and hard baked adobe lands to plant food without the use of a plow. Thoroughly stirs the soil and lets in the air—keeps surface true—all other disc harrows have to be run in half laps. Shape of discs and disposition of sections allow of working at any angle on the field. Jointed pole takes all weight off horses' neck. Does twice as much as other harrows with less draft.

Will increase your crops from 25 to 30%. Is fully guaranteed by us as the most effective cultivator made. Write for fully descriptive booklet and prices.

A. BELANGER
Montmagny, Que.

22

Accommodations for Live Stock a the Dominion Fair.

The Dominion Exhibition at St. John will demonstrate to stock breeders, and for that matter to the public at large, what may be rightly considered to be the "last word" in up-to-date live stock accommodations. At the time of writing, contracting builders are going over plans submitted by the Exhibition Association and in a few days tenders will be opened. Mr. W. F. Burditt, Maritime Provincial representative of the Frost & Wood Company, well known Canadian farm machinery manufacturers, has for some years made this department of St. John exhibitions his especial labor and the materialization of present plans will be the composite result of his careful study at Toronto, Sherbrooke and other big fairs last year. Mr. Burditt has gone even further than this and in many ways the St. John accommodations for live stock will out-point other shows in special excellence.

The principal feature in cattle accommodations this year will be that every animal will be under cover. There will be no exposure to wind and weather and spectators standing at the top of the decline walk or corridor, will be enabled to look upon 500 head of cattle at a glance, something entirely unique in cattle exhibiting. The spectator's corridor will be 4½ feet wide and the peculiar advantage of taking in the whole show of cattle at a sweep.

There will be ample light and perfect ventilation, an entire absence or muss and, as before stated, animals and spectators will be enclosed in a large airy building. A continuous row of windows at the back of the stalls will make the interior as light as out-of-doors. These conditions compared to the inadequate facilities and rough sheds of former fairs should be of especial satisfaction to exhibitors particularly. That the public will appreciate the improvement is without question as it will be quite unnecessary to tramp about between the sheds as before. Indeed at Toronto and other arge fairs live stock is housed in numerous detached structures making a comprehensive inspection a matter of tiresome detail.

Cattle exhibitors will be interested in machinery to be installed for the carrying away of litter and accumulations in the cattle sheds. This is a large iron receptacle suspended from a rail-track which is lowered in front of each stall, filled and rapidly propelled through the air to the exit, where it is dumped into carts. There are a few of these carriers in operation already among progressive NewiBrunswick farmers but the vast majority will doubtless see them demonstraed for the first time. The drainage in the sheds will be on up-to-date lines and thoroughly efficient, and water outlets will be distrubuted in convenient sections obviating the bothersome necessity of leading cattle to outdoor tubs and troughs as heretofore.

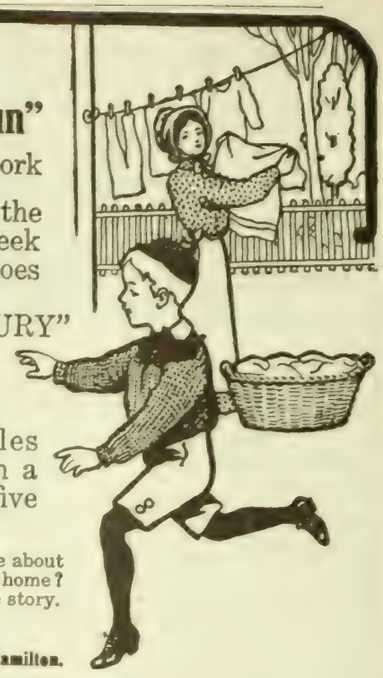
It is planned to have the accommodation for sheep in keeping with most modern ideas. In this department spectators will be afforded an excellent view of the little animals from two large elevated walks. On either side of these walks will be series of pens, each pen 6 feet square. It is expected there will be more than half a hundred of these. Picket work and open-work carpentry generally will chatacterize the makeup of this structure, assuring free circulation of air and healthy temperature for the wool-coated crea-

"Too Late—The Washing's Done. You Have Missed All The Fun"

The "NEW CENTURY" takes all the work out of wash-day.

It makes wash-day, the easiest day of the week to the woman who does her own work.

The "NEW CENTURY" —with its ball bearings, powerful spiral springs and easy action—enables even a child to wash a tubful of clothes in five minutes.



Why don't YOU learn more about the no-work way of washing at home? Our booklets tell the whole story. Write for them.

CUMMER-DOWSWELL LIMITED, Hamilton.

"the finish that endures"

ML Floorglaze

Use it to make floors bright and smooth as glass, easy to keep clean, (soap and water won't hurt M L Floorglaze). Doesn't get cracky; doesn't show scratches; lasts amazingly and holds its beauty. Surpasses paint or varnish or stain. Renovate your whole house with M L Floorglaze at small cost—a gallon coats 500 square feet. Apply it yourself to-day and it will be dry to-morrow morning. Get M L Floorglaze now.

M L FLOORGLAZE comes in tins of handy size, little and big. Choose among 17 enduring colors in solid enamel—seven shades in Lacs that imitate hardwoods exactly—and Transparent for natural finish. M L Floorglaze won't fade and is weather-proof—so use it on outdoor work as well as for indoors. Has a hundred uses about your home—ask your dealer or get new from us direct. Imperial Varnish & Color Co., Ltd., Toronto, Ont.

Recommended and Sold by All Reliable Paint Dealers and Hardware Merchants

Make this 60-Day Test of Brantford Roofing--then Test Any Other Make

Write us, or your dealer, for sample of *Brantford Asphalt Roofing*. Place it in water for sixty days. When you remove it, rip open with heavy knife, and you'll find insides—the vital part—perfectly dry, life-like, solid—as *before* test. Just think of severeness of this test! The result is evidence you *cannot* overlook. Then make this test with *any other* Roofing. You'll find the wood pulp—jute or cotton-cloth insides soaked—softened—lifeless. It *cannot* withstand severe weather, which is, at its worst, not *one-twentieth* so severe as *Brantford's Test*. Wood pulp is like paper. It *acts* like paper, when soaked—wilts away. How *could* you expect such a foundation to fight off Roofing Enemies! For resistance, it *must* depend upon animal fat, grease, or other refuse coating, themselves veritable mines of danger. They evaporate—wear off—expose shameful foundation to awaiting enemies. This coating cannot *prevent* penetration—protect defenceless insides from harm. But *Brantford Asphalt Roofing* Foundation is one sheet of evenly-condensed, long-fibred *pure Wool*, with life and body of its *own*. A *secret* mixture of *Asphalt* is *forced* into it, soaking every fibre. After mixture dries, foundation possesses resisting-power *no* amount of soaking or bending can effect.

Brantford Roofing

after special Water-proof Coating, into which Silica Sand is rolled under pressure, is applied, becomes a solid mass of resistance. It is weather, acid, alkali, frost, water-proof. *Cannot* freeze, crack or melt. Wonderfully pliable. Brantford has but one cost—first. Write for free Book and Samples.

Brantford Asphalt Roofing, No. 1, 2, 3.
Brantford Rubber Roofing, No. 1, 2, 3.
Brantford Crystal Roofing, one grade only, (heavy).
Mohawk Roofing, one grade only.
BRANTFORD ROOFING CO., Ltd., BRANTFORD, CAN.

tures. The sides of the building will be open but provision is made against stress of weather. Should any of the days be inclement spectators will also be protected, which was not the case at the last and previous exhibitions.

The piggery will largely follow the same plan of erection as the sheep pens, special attention being paid to ventilation, freedom from overcrowding, sufficient lighting and satisfactory sight-seeing.

Heretofore, exhibits of horses have been made in long rows of box stalls. These stalls will remain but in addition there will be generous accommodation for harness horses in new barns to be situated in the north-east section of the fair grounds. These will be arranged with broad central aisles for the convenience of spectators and long rows of stalls on the sides. Day light will be furnished through the roof, and ventilation is to be provided by modern methods.

As has been announced in the daily press the poultry and pet stock will be housed in what has heretofore been known as agricultural hall, a large building standing between the central area and the cattle reservation. Practically twice as many birds and small stock can be accommodated here than under the old conditions. The building is to be altered and adapted to insure satisfactory lighting and fresh air, and the present calculation is every inch of space available will be taken up.

The big Dominion Show is almost a half year distant but the exhibition association and the central management on Prince William Street, St. John is thoroughly dealing with details which augers well for the early consummation of all plans and an exposition of the resources of Canada particularly the Maritime Provinces, that will astound our eastern people and make the whole big Dominion sit bolt $upright and take notice.

Don't Judge a Roofing by its Looks.

Beware Imitations.

Most ready roofings look the same. The weather alone finds the hidden weakness.

You can't tell by looks which roofing will last or which will go to to pieces in a season.

But you **can** do this. You can identify from its 300 substitutes the **only** roofing which **has lasted.**

Ruberoid Roofing

(TRADE MARK REGISTERED)

Fac-simile of the **"RUBEROID MAN"** on the wrapper and the word **"RUBEROID"** is stamped every few feet on the underside of the fabric.

Write us for a copy of our **FREE Book,** which gives you valuable information about all Roofings. **WRITE TO-DAY.**

The Standard Paint Co. of Canada, Limited.

Manufacturers. **MONTREAL.** **Dealers Everywhere.**

What They Say:

W. W. BROWN,
WOODSTOCK, N. B.

"I find I have been insured at "less cost, with prompt pay- "ments of losses, have had "courteous treatment, and "a share in the profits of "the association."

Do YOU want YOUR share of the Profits of an established business?

Apply to

ATLANTIC MUTUAL FIRE INSURANCE ASSOCIATION,

Head Office: ST. JOHN, N. B.

Agents Wanted!

WHERE AMHERST MAKE EXCELS

7 POINTS

—THE PERFECT NUMBER—

Users of Amherst Shoes Get Their Moneys Worth.

Have you Live Stock for sale? If so, advertise in the Farmer

SPRAY FOR GAIN

This season see to it that your orchard is given a proper chance. To do this you must **spray.**

In selecting your spray materials take care to secure those upon which you can confidently depend for results.

The very best commercial sprays to-day are

Cooper's V1, V2 and V3 Fluids.

They are scientific realizations of perfect **Fungicides** and **Insecticides.**

They are endorsed and recommended by the **Dominion Fruit Inspector for Nova Scotia, G. H. Vroom, Esq.,** of Middleton.

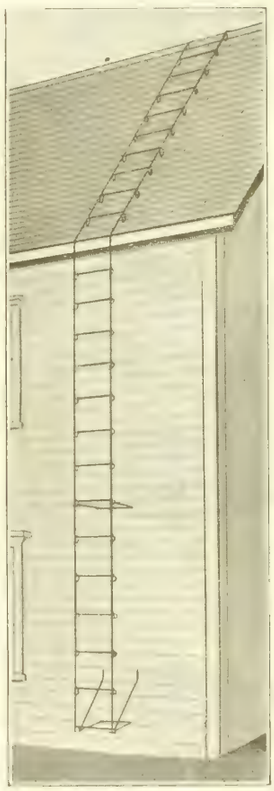
They cost $2.50 per gallon anywhere and one gallon will Make **100 gallons.**

Ask for your local dealer's name from

Wm. Cooper & Nephews,
Toronto, Ont.

ONE Agent Made $156.45 in 20 Days Selling the Acme Steel Ladder.

This Proves It a Seller. It is New and Useful.



In the short time the ACME STEEL LINK LADDER has been on the market, it has shown itself to be far superior to the wooden ladder, which not only rots out in a very few years, but also retains moisture, and consequently rots the building. The little feet which holds the ACME LADDER out from the building or roof about three inches, do away with the holding of any moisture, and allows the sun to come in contact with the building at all points, except the immediate point of contact on the seat of the ladder, which is so small that damage cannot result under the most unfavorable conditions.

It is a neat appearing ladder on a building and one that will last—you might say—for all time to come and will always be perfectly safe to use. You can, by its mechanical construction, add to its length at any time, if required, as there is just one link to each foot. Another advantage you will often hear users of the ACME STEEL LADDER put forth is that it is a ladder that will not be lent, and you will always have it when you want it. In fact you never know when you are going to want a ladder, and you may have no use for one for some time, but when you least expect it, you may want one the worst way and would give many times the price if you had one on the roof.

Every person will agree that they should have a ladder, in fact most people at some time, have had one, but in many cases it has either been lent back and forth until it has become lost or broken or it has been left on the building until it has rotted, and consequently a very large percentage of the buildings to-day have not a ladder near them and many times a fire could have been avoided if they had had one.

Other steel link ladders have been made and sold, but there is no steel link ladder possessing the features in its make up, which give the perfect rigidity that the ACME STEEL LADDER DOES. The ladder is perfectly rigid when put together

The construction is such that it can be turned at any angle, thus enabling the user to drop his ladder from the roof peak to the eave, and then by breaking at the latter point, suspend the remainder of the ladder so as to have it come into contact with the ground.

Being made entirely of steel, it is impossible for it to burn during a fire. It makes a very good fire escape and is commonly used as such. The patent lock on the ACME LADDER makes it impossible to buckle, and also keeps the sides of the links from springing together, which is of very great importance when put to the test.

In fact one can safely sing:

"If I wanted a ladder to reach the sky,
The Acme Ladder I'd certainly buy."

We still want good live agents in a few unrepresented sections. If we have not an agent in your district, write us for our selling proposition.

ACME STEEL LADDER CO., - - Sussex, N. B.

Wanted Live Men.

We pay salary or commission. It all depends upon what you can do.

Each application will be dealt with as received.

Personal calls given priority.

We want men of brains—with energy.

Men, who want to make good and increase their earning capacity, who are too ambitious to drag along day after day in inferior positions.

We want several men of this class as travelling representatives of the MARITIME FARMER.

The MARITIME FARMER is an easy seller because nearly every farmer in the Maritime Provinces wants it when he sees it.

To those capable of handling this proposition, we furnish with teams and pay a liberal salary.

If you think you are of the right material and have a capacity for work, write us.

The Mariime Farmer,
Sussex, N. B.

Labor Saving Device in the Home.

One of the best labor saving devices is "not to worry." Worry uses up a tremendous amount of nervous energy and when one worries and frets and fusses over all they have to do they accompolish far less than one who takes life more moderately.

Do you not remember the story of the Hare and the Tortoise? How that hare did fuss and keep looking back and even mocking the poor tortoise, who plodded on calmly and reached the goal first.

One can become as tired from worrying as from actual work. I have in mind a woman who lived to be about eighty, she had done all her own work for many years, if not always; kept her house in exquiite order; looked after her family; tended carefully to a flower and vegetable garden. She was unruffled and cheerful; have always a kindly, thoughtful word for every one. When her when her friends came to see her, she would set before them a dainty little lunch. Her brow was smooth; she always had a bright smile for young and old, and every day of her life from one until two o'clock she lay on her bed in her quiet room and slept or rested.

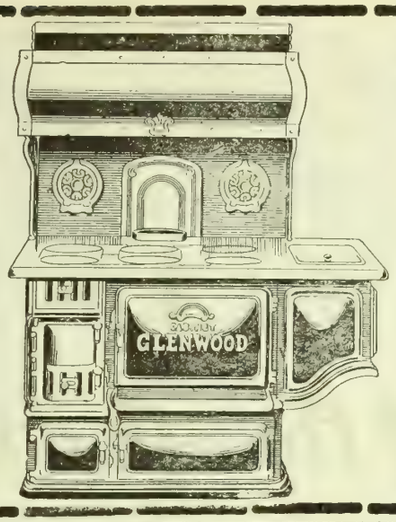
Any device which saves strength must be a labor saving device. The body can be so wisely used that we can make of it a labor saving device. For instance: The back bone is a double curved line of bones of great strength and flexibility and if kept in its proper position the other organs will likewise be in their proper places. Its flexibility enables us to move about with much freedom, but when these different movements are completed the back bone should come back to its natural position and when possible be kept there. There are so many suggestions of how this may be done. First, in standing; again, sitting we will say for sewing. When paring potatoes over a table that is too low or opening an oven door to see how badly your pie is burned, why not drop to one knee rather than throw the body out of its natural position.

In lifting a chair you will find that the muscles of the arms alone can be made to take the strain and the muscles of the back need not be used at all. And in sweeping also the muscles of the arms may bear the strain rather than the back.

It is less tiring to a short body to reach up to a table or sink than for a tall person to stoop down to one, and a short person could use a stool.

I have sympathized with those who do the family washing, so much more since the winter I did my own and had to use fixed tubs set entirely too low for my comfort. Will you try the experiment of placing your tubs high enough to prevent your ɹoop bɐuᴉpnᴉʇs ɐuʎ ɯoɹǝ ʇɥɐu absolutely necessary, and not only the tubs but your working tables or the sink where you wash dishes 1095 times in the year.

"Making the head save the feet," is a familiar saying. Perhaps too much so, for familiarity often breeds contempt. The following may illustrate how a little planning saved the feet many useless steps. In a household science class room of one of our colleges were two cupboards at opposite corners of a very large room. And at one end of this room were three cooking stoves, two sinks and working table. The cupboard at this end of the class room occupied one corner and had four shelves enclosed within glass doors. The two lower shelves held the glass ware of the class, tumblers, plates, fruit bowls, things used when a dinner or luncheon was served, perhaps once or twice a year. The cupboard at the far off corner of the room contained the kitchen linen, the wash clothes



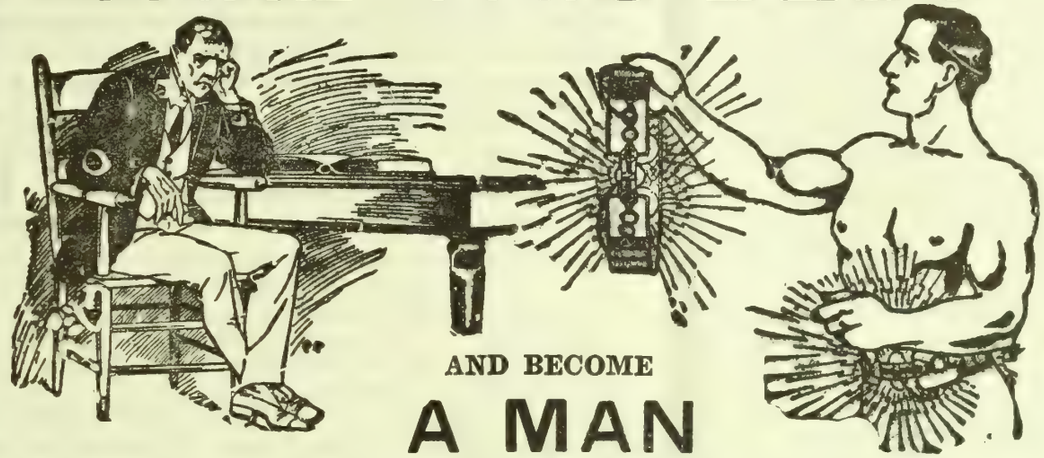
Do You Want a First-Class Range that has been Proven So by the Hundreds that are Using Them ? Then Get a GLENWOOD.

This cut shows our Cabinet Glenwood with Hot Closet and Reservoir. A Range that is made to do the work of Hotels and Restaurants, Camps Families, or anywhere that a stove is used to its fullest extent, it will stand the wear. In offering our Glenwood Ranges we are not giving you a Range at cost or below cost, but we are giving you a first-class Range at a fair price. We are not going through the country forcing goods on the people, but we will prepay freight to any Station or place that you want a Range sent.

Write for prices and booklets of our Glenwood Ranges. All our Glenwood Ranges are made in St. John by

McLean-Holt & Co., 155 Union St., St. John, N. B.

TAKE THIS BELT



AND BECOME

A MAN

All men cannot be MILLIONAIRES, but thousands of them could be much better off FINANCIALLY, SOCIALLY and in every other respect if they would guard their health. With VIGOROUS HEALTH—a body full of ELECTRICAL ENERGY—a man can make OPPORTUNITIES if he don't find them, but lacking in the COURAGE and SELF-ASSURANCE that is born of MANLY VIGOR, he is but a derelict—a vessel without mast or rudder—cast hither and thither by every storm of life that besets his pathway. GIVE ME A MAN that has exhausted his VITALITY—suffering from PAINS AND ACHES—MENTAL DEPRESSION —SLEEPLESSNESS—NERVOUS DEBILITY—without HOPE—AMBITION — COURAGE gone — drifting with the tide—and I can transform him into a STRONG MAN—A man of push—a man that will make his way in spite of all obstacles—if he has anything left to build upon, and he will follow my advice and use the DR. McLAUGHLIN ELECTRIC BELT as I direct. Save your tobacco money for a few weeks—cut out a few of your health-destroying, soul-destroying habits—procure one of these appliances—USE ELECTRICITY, and use it in the right way to invigorate your body, and you will look upon the day you gave your case to me as the TURNING POINT OF YOUR LIFE. Here is what some say of this remedy, who have used it:

Dear Sir,—I am perfectly satisfied with your Belt for what it has done for me. I am now a well man.

Yours, very truly,
HUGH McLEAN.
New Glasgow, N.S., Box 464.

Dear Sir,—I find your Belt all right for every kind of pain that is felt in the human body, and I have not missed a day with sickness since I got the Belt.

Yours very truly,
JAS. W. BARRIE.
Auld's Cove, N.S.

Dear Sir:—

Having received a Belt from you some years ago, I now desire to express myself in regard to the benefits, which I received from it. I wish to say in as few words as possible that it was all that it was represented to be, having cured me of Indigestion and other ailments, and I must say that I feel a new man, and I give all credit to Dr. McLaughlin's Electric Belt. I would advise any one suffering to give the Belt a trial, and I know they will feel as I do. Although I have been four years benefited without saying so to you, I have been doing all I could in my locality personally. So giving you the privilege of using this letter as you wish, and wishing your Belt every success, I remain,

Sincerely yours,
SAM J. HARNETT.
North Gower, Ont.

Any man or woman who will give me reasonable security, I will send them the Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED

Never mind waiting until you use the last dose of that bottle from the drug store. Begin now. Call and talk your case over with me or send for my book. It costs you nothing. For over 24 years I have taught the great truth that "ELECTRICITY IS LIFE," and have proved the soundness of my doctrine by making cures when others have failed time and again. Others have aspired to do the work I am doing with my ELECTRIC BELT. They offer you Electricity in some other form, or an "electric belt" that possesses no curative power whatever. They are like "boys on bladders" floundering in a sea of uncertainty—while to-day the DR. McLAUGHLIN ELECTRIC BELT stands the world over as the most correct—the most perfect—method of applying Galvanic Electricity to the body that has ever been devised. Call at once or send coupon for our FREE illustrated 80-page book, from which you can learn much that you want to know. Do it now.

M. K. McLAUGHLIN

214 St. James St., Montreal, Can.

Dear Sir,—Please forward me one of your books as advertised.

Name .....

Address .....

Office Hours—9 a.m. to 6 p.m.; Wednesday and Saturday till 8.30 p.m.

and dish towels, oven towels, squares of cheese cloth, hand towels, floor cloths, things that were required every day about the sinks, tables and stoves and it meant much walking each day to get towels for different purposes. Can you you not see how many steps were saved by bringing the linen to the cupboard near the stoves and sinks and placing the glass in the far away cupboard.

I should like to hear some of you express your opinion on the convenient width of cupboard shelves. We have some wide-shelved supply cupboards and feel quite sure that they are not the best to have. They hold two rows of articles. The large things as flour and sugar tins are at the back, and smaller dishes as egg basket and butter dish are at the front. Now one wants sugar quite as often as they want eggs and every time we want to get sugar we must first move aside the egg dish. If we put the eggs at the back and sugar in front every time we want eggs we must move the sugar dish. The shelves are wide apart but in putting away the sugar or flour tin they are very apt to strike the shelf above and sometimes it proves trying to the temper. Can any of you give any decided opinion as to the advantages of narrow shelves over wide ones?

There are many phamphlets printed that contain suggestions concerning convenient arrangements of pantries, cupboards and kitchens. The Department of Agriculture at Washington, have some excellent articles and by writing to the Secretary of that Department one can obtain them, or by writing to Cornell University, Ithaca, N. Y.

The possession of that labor-saving device "common sense" is worth a good deal.

A lady had been invited with some other friends to take tea at two different homes. At one home the party saw but little of their hostess and her family until they sat down to a table, simply groaning under its burden of the good things of life, white and brown bread, biscuit, strawberry preserve, apple, mince and Washington pie, jelly roll, raisin cake, fruit cake, gingersnaps, cookies, doughnuts, turnovers, and the guests felt that they were expected to eat a portion of every one of these things. Well they did their best. The lady confessed that she felt like the little boy after his Christmas dinner, who said, "take I to bed but don't bend I." When the meal was finished the family were again busy putting away the remains of that feast, and the guests saw but very little of them.

The same lady was invited with a few friends to take tea at another home. Their hostess sat with her friends until a few minutes before they sat down to the table, when she excused herself to put her tea to steep, and her friends sat down to a daintily served, well-cooked meal of baked beans, brown bread and white, canned fruit, macaroons and hot, freshly steeped tea. After the supper the hostess was able to set her house in order in a very short time. She was not tired out and was able to enjoy the company of her guests for the entire evening, and they were able to enjoy her company, more especially as they realized that in giving them pleasure she had not over-taked her own strength.

Does true hospitality consist in tiring ourselves in order to feed our friends until they are uncomfortable.

In the mending to be done in a home is it good common sense to allow the holes in clothes and linen to become very large before mending them? If a stitch in time saves nine why not take that stitch and and save nine. If it were a dollar in time saves nine, do you think the dollar could be found?

At this season, the spring nightmare looms before the house-maker. I refer to house cleaning. The following conversation took place between two ladies. Don't you dread the awful house cleaning coming?" "No" replied the other "not nearly so much as I used to. You see as our carpets wore out we painted our floors, or put down hard wood floors and have a rug in the centre, and house cleaning is not half the work it used to be, when we had to take out tacks, roll up dusty carpets, spread them on the line and prop them up with a stick every time the wind blew them down, beat them clean and then get down on both knees and tack and stretch them into place. Then with the rugs or squares, we put one out on the line to let the wind blow through it, every month, and it keeps our house fairly clean all the year round."

Having a moderate amount of system in the keeping of everything in its place is an excellent labor saving habit. So much energy is used looking from one end of the house to the other for Johnny's cap, which he carelessly left out of doors.

Men are thoroughly up-to-date in supplying themselves with labor saving devices, none more so than the farmers. They have their binders, reapers, mowing machines, gasoline engines for pumping water for the cattle and other uses. Do we see as many labor saving devices in the homes, and if not why not? It may be that house conveniences are not so well known. May I mention a few that I know are worth having in every home. For the kitchen, the granite or aluminum utensils are much lighter to handle than the

$1,000 for a Coat of Paint

It seems hard to believe, yet that is the sum of money that a coat of *Martin-Senour Paint 100% Pure* added to the selling price of a certain house.

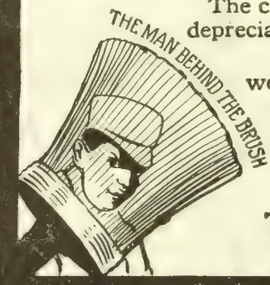
For several seasons, a shabby weather-beaten house had been offered for sale. There were no buyers until a shrewd real estate broker purchased the property and, with a single coat of paint, magically changed it from a shabby house to that of a home of dignity—a home of comfort and elegance; furthermore, he sold it within a very short time clearing $1,000.

Nothing so preserves and maintains the value of your property like

Martin-Senour Paint 100% Pure

whose mission is to paint your buildings uniformly, economically, safely and surely.

The coat of Paint made the sale. Don't let your property depreciate in value for the need of paint.



If your dealer cannot supply you, notify us and we will gladly direct you to where our paints are to be had.

Decline All Substitutes

Write for illustrated booklet, "Home Beautiful," and interesting color card. Free for the asking.

The Martin-Senour Co., (Limited) Montreal

Pioneers Pure Paint

Only The Best Seeds Are Worth Planting

It's a positive waste to take good land, whether in field or garden, and handicap it at the start of the season by planting poor seeds.

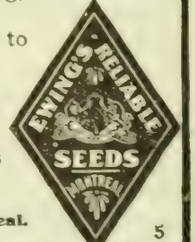
Even if they do cost a little less than Ewing's, the amount saved will be lost several times over in the smaller crop you'll get.

Ewing's Reliable Seeds

instead of the doubtful kind will often mean double the crop—a good profit over the cost of growing, instead of a loss.

Ewing's seeds are perfectly clean, true to type, strong, healthy, and, under proper conditions, sure to grow.

Write for our Illustrated Catalogue and look it over carefully before planting time. Then if your dealer hasn't Ewing's Seeds buy from us direct.



Wm. Ewing & Co., Seedsmen, McGill St., Montreal.

5

GAS ON THE STOMACH

Relieved at Once by Father Morriscy's No. 11 Tablets.

Many people find that no matter how carefully they watch their diet and deny themselves this, that or the other favorite dish, still after every meal gas forms in the stomach and everything seems to turn sour.

Besides causing great discomfort, this condition makes it impossible to get the full benefit from the food eaten, and the body is continually starving with a full stomach.

Father Morriscy's No. 11 Tablets promptly relieves this and other stomach disorders. Each Tablet has the power of digesting a pound and three-quarters of food, so that even though the stomach may be in a very bad or weakened condition one tablet taken after each meal will insure proper digestion and prevent sourness, gas in the stomach, pain or discomfort.

The case of Miss Maggie Leahy, of West Franklin, Ont., is a sample of what Father Morriscy's No. 11 Tablets can do. Writing on Jan. 5th, 1910, she says:

" Your No. 11 Stomach Tablets suit my case exactly, as I am ever so much better since using them than I had been for the last seven years. I could hardly eat anything that would not turn sour on my stomach, or cause gas. My Doctor said it was Catarrh of the Stomach. I had no pain, but gas after eating. The first tablet I took gave me relief, and I am still continuing their use."

If you happen to eat a little too much for dinner, or something that does not agree with your Stomach, just take a No. 11 Tablet and you will feel all right in a few minutes.

If you have been troubled with Indigestion or Dyspepsia a course of Father Morriscy's No. 11 Tablets will soon put your stomach into a healthy condition again.

50c. a box at your dealer's, or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 103

Dates to Remember.

Dominion Exhibition, St. John, N. B., September 5th to 10th, 1910.

Sussex Exhibition, Sussex, N. B., September 19th to 23rd, 1910.

Charlottetown Exhibition, September 20th to 24th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

N. B. Potatoes

I grow and have for sale large quantities of Potatoes. Seed varieties a speciality.

Geo. A. Fawcett, Middle Sackville, N B.

LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble can be stopped with

ABSORBINE

Full directions in pamphlet with each bottle. $2.00 a bottle at dealers or delivered. Horse Book 9 D free.

ABSORBINE, JR., for mankind, $1 a bottle, removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores, Allays Pain.

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MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING, ARGYLE ST.,

Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application TELEPHONE 1905.

heavy iron pots; a pot holder with tape attached pinned at the waist saves many steps on baking day A sink with drain pipe and pump. And linoleum for the floor, which can be kept clean so easily by using a mop, a bucket of warm water with one-half cup of kerosene.

There are a number of washing machines on our market. Some are really excellent, especially so for washing blankets.

For the daily cleaning of floor rugs, a carpet sweeper is excellent, but it does not take the place of a broom, as one cannot use it for the corners and close to the walls.

I have been asked by several about the bread mixers. In some cases ladies have told me they could not use them as they did not like them. Others have said they would not be without one. I know of one maid who makes excellent bread, as good as I have ever had, and she uses a bread mixer. It certainly saves a great deal of work to use one.

At a Women's Institute Meeting in Ontario, a gentleman told a story that always comes into my mind when I see the phrase, "labor saving device." It was of a woman who worked hard, and was proud that she worked hard. She was anxious to swell the family bank account, and to help her husband, so she scrimped and saved, got down on her knees and scrubbed the bare floor of the kitchen, did the fami,y sewing by hand, carried water from a spring and even brought in the wood. She kneaded the bread and did the numberless things that must be done in a home. She never dreamed of getting a sewing machine or carpet sweeper, or any device that would save her strength. She took no time even to read about them. In time this human machine wore out, she could easily be replaced. As a final incident of her life the husband bought a tomb stone for her grave. Being very narrow it was less expensive and for that reason he decided it would do very well. He directed the stone cutter to carve the name, and below it these words. "Lord she was thine." When the neighbors went to see it in its place it was found that the stone was a little narrow, and the inscription read, "Lord she was thin."

Let us sum up the points of discussion. Do not worry. Rest or sleep an hour each day. Use body intelligently. Use common sense. Use system in the nome and use all labor saving devices that you can afford.

An address by Miss Grace Dutcher, Household Science Instructress at the Prince of Wales College, Charlottetown, P. E. I., before the Ladies Institute Summerside.

Bonusing the Dairy Cow.

Editor Maritime Farmer:—

I was much interested, while at Fredericton, by hearing Mr. Schofield, explain some of the details of the scheme for the proposed bonusing of the dairy cow.

I believe he has a sound idea, and one that would do more good for the money invested than if spent on the bonusing of the common mercantile machinery.

The only drawback that appears to me is the difficulty of getting our government to increase its grant, from the present princely sum of ten thousand dollars, to an amount that I believe Mr. Schofield gave us roughly as three hundred thousand as its first item.

They do not dare to tackle the "cratur", they are paralized by its size.

In the meantime, we must if possible, do something to get a move on the cow with a little less expense.

One of the arguments against the bonus scheme would be, that the man that tests his cows gets his reward without any bonus. The answer of course is that it is the three thousand pound cow man that we wish to get to sit up and take notice.

Granted, then, that it is the unprofitable cows that we wish to

Simmers' Seeds.

Complete Vegetable Garden Collection.

Contains 25 packets of the best Vegetable Seed, sufficient to furnish vegetables throughout the year, and one packet of Flower Seeds, which we will send postpaid to any address in the Dominion of Canada for the extremely low price of **$1.00.**

Bean—Simmers' Giant Wax.
Beet—Blood Turnip
Cabbage—Vandergaw.
Carrot—Scarlet Intermediate.
Celery—White Plume.
Corn, Sweet—Cory.
Cucumber—Chicago Pickle.
Cucumber—Long Green.
Lettuce—Simpson's Early.
Muskmelon—Montreal Green Nutmeg.
Watermelon—Cuban Queen.
Onion—Yellow Danvers.
Onion—Prizetaker.
Parsley—Champion Moss Curled.
Parsnip—Improved Hollow Crowned.
Pepper—Sweet Spanish.
Peas—American Wonder.
Peas—Stratagem.
Pumpkin—Mammoth.
Radish—Scarlet Turnip, White Tipped.
Salsify—Mammoth Sandwich Island.
Squash—Summer Crookneck.
Squash—Hubbard.
Turnip—Purple Top, Strap leaved.
Tomato—Early Ruby.

And packet Wild Garden Flower Seed Mixture. Also a copy of Simmers' Vegetable and Flower Garden (New Edition), and a copy of our handsome **1910 Seed Catalogue,** which, in itself, is a mine of valuable information. Don't miss this.

J. A. SIMMERS,

Seeds, Bulbs, Plants, - TORONTO, ONT.

More bread and Better bread

——And the Reason for it

A STRONG FLOUR can only be made from strong wheat. Manitoba hard wheat is acknowledged the strongest in the world—and that is the kind used for Purity Flour.

But that's not all. Every grain of this wheat contains both high-grade and low-grade properties. In separating the high-grade parts from the low-grade the Western Canada Flour Mills put the hard wheat through a process so exacting that not a single low-grade part has the remotest chance of getting in with the high-grade.

Of course this special process is more expensive to operate but it means a lot to Purity flour users—that's why we use it.

It means that Purity Flour is made entirely of the highest-grade flour parts of the strongest wheat in the world.

It means a high-class, strong flour and therefore yields "more bread and better bread."

Purity may cost a little more than some flours, but results prove it the cheapest and most economical after all.

PURITY FLOUR

WESTERN CANADA FLOUR MILLS COMPANY, LIMITED
MILLS AT WINNIPEG, GODERICH, BRANDON

RENNIE'S

XXX Quality Vegetable Seeds

Rennie's XXX Early Sweet Table Corn.

The sweetest and earliest white kernelled table Corn. Packet 10c, 1 lb. 40c postpaid. 20 lbs. $2.50, 5 lbs. $1.50, 1 lb. 35c by express at buyer's expense.

Rennie's XXX Solid Head Lettuce.

Immense solid heads. Crisp and tender. Perfectly blanched heart. Packet 10c, 1 oz. 25c, ¼-lb. 60c, 1 lb. $2.00.

Rennie's XXX Golden Green Flesh Musk Melon.

Spicy Golden Green Flesh. Small seed cavity. Exceedingly productive. Packet 10c, 1 oz. 35c, ¼-lb. 90c, 1 lb. $3.00.

Rennie's XXX Connecticut Yellow Globe Onion.

Perfectly round, uniform shape, not necky, attractive appearance, sure keeper, heavy cropper, fast seller. Packet 10c, 1 oz. 25c, ¼-lb. 70c, 1 lb. $2.50.

Rennie's XXX Connecticut Large Red Onion.

Unequalled for cropping, keeping and shipping. Solid and heavy and perfect. No thick necks. Packet 10c, 1 oz. 25c, ¼-lb. 70c, 1 lb. $2.50.

Rennie's XXX Earliest Sweet Table Water Melon.

Packet 10c, 1 oz. 20c, ¼-lb. 60c, 1 lb. $1.90.

Rennie's XXX Evergreen Curled Table Parsley.

Packet 10c, 1 oz. 20c, ¼-lb. 50c, 1 lb. $1.50.

Rennie's XXX Melting Marrow Peas.

A distinct new dwarf sort. Packet 10c, 1 lb. 35c, 6 lbs. $1.50, peck $3.75, by express at buyer's expense.

Rennie's XXX Guernsey Parsnip.

Packet 10c, 1 oz. 20c, ¼-lb. 40c, 1 lb. $1.00

Rennie's XXX Earliest Table Marrow Peas.

Earliest, sweetest and largest wrinkled Marrow Pea grown. Packet 10c, 1 lb. 40c postpaid. 1 lb. 35c, 5 lbs. $1.50, peck $3.75 by express at buyer's expense.

Rennie's XXX Scarlet Round White Tipped Radish.

A greatly improved outdoor strain. Packet 10c, 1 oz. 20c, ¼-lb. 50c, 1 lb. $1.50.

Rennie's XXX Scarlet Oval Radish.

Outdoor strain. Packet 10c, 1 oz. 20c, ¼-lb. 50c, 1 lb. $1.50.

Rennie's XXX Autumn-Winter Green Hubbard Squash.

The highest bred type in cultivation. Packet 10c, 1 oz. 20c, ¼-lb. 50c, 1 lb. $1.50.

Catalogue Free

WM. RENNIE CO. LIMITED

190 McGill St., MONTREAL. 18

A Special Reason

for our present standing is our carefulness respecting statement of facts. After about forty years of public service, we cannot be accused of a misleading statement or an unfulfilled promise. We are grateful for the evidence afforded us by our patronage that we stand higher in public appreciation than at any previous time

Free catalogue to any address.

THE ST. JOHN Business COLLEGE

S. KERR, Principal.

F. A. KIERSTEAD,

Commission Mrchant,

City Market - St. John, N. B.

Residence, Albert St., Sussex. N. B. Phone 131

Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

reach by getting their owners to find them out, is there not some way that the scheme can, at least, be started with a little less grease?

I was much pleased with what Mr. Good said to us regarding the Dominion Exhibition. He did not appear as the man with the swelled head that knew it all, but is ready to have any feasible scheme submitted for his consideration.

I would suggest that prizes be given to the dairymen who, by keeping records, of the productions of their herds and the cost of feed, between the first of April and the first of September, 1910, and who in the opinion of the judges, do most to benefit themselves and their neighbors.

I would suggest that before starting the test each man put a price on each of his cows for future reference.

In my opinion, the strong point about this scheme is that it would not be the man with the good cows you would be stimulating so much as the owner of the poorer ones, for it is the man that finds out his non-paying boarders that will be helped the most.

In the poorest herds, there are usually a couple of fair cows, that may be used as a foundation for breeding.

I would suggest that this competition be divided into two classes. First, to those who have been keeping records and the other those who have not. Let the prizes be liberal enough to amply reward a man for his trouble, even if he did not get far greater returns from knowing his cows.

What better educational feature could we have at the Dominion Exhibition, than two cows from the herd of each of the prize winners in this competition that to the average buyer would be about of equal value, but the one being maintained at a loss to her owner and the other paying him a good profit.

CHAS. PETERS.

Kings Co., N. B.

A Stranger Does Well Under New Brunswick Conditions.

Editor Maritime Farmer:—

Last June, I arrived in this country an utter stranger as to its condition, and got settled with Mr. Peters, of Elmhurst, Kings Co., N. B. I find I am able to make a living, do the work and give satisfaction. Mr. Peters tells me "this part of the country, with the exception of being situated near the St. John market does not compare favorably with the Province in general, from an agricultural stand point." I believe money is being made by the small farmer who is up-to-date.

Mr. Peters says, "the greater part of the Province has as many natural advantages as Ontario," where many of my countrymen are making a splendid success of stock raising and mixed farming. He says that, "taking it for the whole year, and the cost of living into consideration, the wages of a laboring man in this Province compares favorably with the West." Of course I have only his word for it, and he would naturally be inclined to prejudice. I think what is bringing the Scotch people out to Canada is the idea of bettering their conditions generally and getting homes of their own.

Like all other classes of immigrants they are going to what they believe to be the best country for them. I would like to get the opinions of other readers on this question. Let us discuss it for the benefit of employers and employment seekers.

JAMES TORRANCE.

Kings Co., N. B.

Four minute Records for the Edison Phonograph

When Mr. Edison invented the Amberol Records he invented the longest Record ever made for a sound-reproducing machine. But the Amberol Record is not only longer; it is better. It is made from a new composition which makes a more perfect reproduction of music or the voice than any known method.

An Amberol Record in an Edison Phonograph is the most perfect reproduction of a song or a piece of instrumental music that you have ever heard.

But do not accept our statement. Go and hear it. There is a dealer near you. Hear the Edison Phonograph and compare it with other instruments before you decide. We will leave it to your judgment as to whether you can buy anything for the price that will give you so much real, genuine fun and pleasure as the Edison Phonograph.

Edison Phonographs - $16.50 to $162.50
Edison Standard Records - - .40
Edison Amberol Records (twice as long) .65
Edison Grand Opera Records - - .85

There are Edison dealers everywhere. Go to the nearest and hear the Edison Phonograph play both Edison Standard and Amberol Records. Get complete catalogs from your dealer or from us.

NATIONAL PHONOGRAPH COMPANY, 100 Lakeside Avenue, Orange, N. J., U.S.A.

No. 1 Thomas' Phosphate Powder.

Yield Per Acre	Wheat	Straw
WITH Thomas' Phosphate Powder	23 cwt., 44 lbs.	57 cwt., 4 lbs.
WITHOUT Thomas' Phosphate Powder	12 cwt., 64 lbs.	29 cwt., 44 lbs.
INCREASE	10 cwt., 80 lbs.	27 cwt., 60 lbs.

Always insist upon getting the genuine No. 1 Thomas' Phosphate Powder and see that every bag has our Number, Brand and Tag. If you have any doubt as to the quality of the goods, insist upon your dealer giving you a certificate in writing that you are getting the genuine Thomas' Phosphate Powder. If not, write to us and we will supply you direct.

Special English [Odourless] Potato Phosphate
High Grade English Fertilizers
Acid Phosphate, Potash, Nitrate of Soda

Write for circulars and pamphlets.

The Anglo Canadian Chemical Co.,
SAINT JOHN, N. B.

SEVEN PER CENT. GUARANTEE INVESTMENT RETURN.

Principal absolutely safe. Established business. American Securities Co., Toronto.

The Maritime Horse Show.

(Continued from page 368.)

E. Bagnall, Charlottetown.

Sec. 4.—Mare, foaled previous to Jan. 1, 1908, 1, "Miss Woodburn," H. K. McLean, Woodburn, N. S.; 2, "Bon Bon," Murray Jones, Amherst; 3, "Maud Allen Wilkes," W. M. Spence, Port Elgin, N. B.

Sec. 5.—Mare, foaled on or after Jan. 1, 1908, 1, "Inheritus," Hugh McMonagle, Sussex.

Sec. 6.—Stallion, any age, Diploma "King Dodds," Dodd Dwyer.

CLASS III.—HACKNEYS.

Sec. 1.—Stallion, foaled previous to Jan. 1, 1907, 1, "Sensation" Geo. R. Chipman, Grand Pre, N. S.; 2, "Fashioner," Roper Bros., Charlottetown, P. E. I.

Sec. 2.—Stallion, foaled during the year 1907, 1, "Model Reformer," R. A. Snowball, Chatham, N. B.

Sec. 3.—Stallion, foaled on or after Jan. 1, 1908, 1, "Cock O' the North," R. A. Snowball.

Sec. 4.—Mare foaled previous to Jan. 1, 1908, 1, "Winona Dignity," W. W. Black, Amherst.

Sec. 5.—Mare, foaled on or after Jan. 1908, 1, "Lily," R. A. Snowball Chatham.

Sec. 6.—Stallion, any age, Diploma "Model Reformer," R. A. Snowball.

CLASS V.—CLYDESDALES.

Sec. 1.—Stallion, foaled previous to Jan. 1907, 1, "Baron Primrose," R. S. Starr, Port Williams, N. S.; 2, Handy Andy, Logan Bros., Amherst Point, N. S.; 3, "Charming Lad," Fred W. George, Sackville.

Sec. 2.—Stallion, foaled during the year 1907, 1, "Royal Baron's Pride," H. R. McMonagle, Sussex; 2, "Baron Belgraddon," R. A. Snowball, Chatham; 3, "Prince William," W. W. Black, Amherst.

Sec. 3.—Stallion foaled on or after Jan. 1, 1908, 1, Baron Majestic, R. S. Starr; 2, June Day, F. S. Black; 3, The Bishop, Geo. M. Hom-Black; 3, "The Bishop," G. M. Holmes; 4, Labori Again, Logan Bros.

Sec. 4.—1, "Pink Rose," Logan Bros., Amherst Point, N. S.; 2, "Soubrette," Logan Bros., Amherst Point, N. S.; 3, "Marnietta," R. A. Snowball, Chatham

Sec. 5.—Mare foaled on or after Jan. 1, 1908, 1, "Princess May," Logan Bros., Amherst, N. S.; 2, Oscar Chase, Port Williams, N. S.; 3, "Baron's Fancy," Logan Bros.

Sec. 6.—Stallion, any age, 1, "Baron Primrose," R. S. Starr, Port William.

Sec. 7.—Mare, any age, "Pink Rose," Logan Bros., Amherst. Silver Cup, donated by Graham Bros., importers and breeders of Clydesdale and Hackney horses, for the best Clydesdale Stallion of any age. Cup to be won twice, not necessarily consecutively, by the same person. "Baron's Pride," R. S. Starr, Port Williams, N. S.

CLASS VI.—PERCHERONS.

Sec. 1.—Stallion, foaled previous to Jan. 1, 1907, 1, "Gluco," Theo. Cook, Charlottetown; 2, "Croquet," F. X. LeBlanc, Buctouche, N. B.; 3, "Erbago," W. E. Barnes, Sackville, N. B.

Sec. 2.—Stallion, foaled during the year 1907, 1, "Pedro," Albert Flemming, Truro, N. S.

Sec. 3.—Stallion foaled on or after Jan. 1, 1908, "Lord Roberts," Chas. Symes, Minudie, N. S.

Sec. 4.—Mare, foaled previous to Jan. 1, 1908, "Distinguee," Chas. Smyes.

Sec. 5.—Mare, foaled on or after Jan. 1, 1908, 1, "Prudie," Albert Flemming.

Sec. 6.—Stallion, any age, Diploma "Gluco," Theo. Cook.

Sec. 7.—Mare, any age, Diploma, "Distinguee," Chas. Symes.

CLASS VII.—SHIRES.

Sec. 1.—Stallion, foaled previous to Jan. 1, 1907, 1, "Eskham Waggoner," D. McGregor, Montague, P. E. I.; 2, "Ranging Duke," Roper Bros., Charlottetown.

CLASS VIII.—ROADSTER HORSES IN HARNESS.

Sec. 1.—Stallion, in harness, 1, "King Dodds," Dodd Dwyer, Pictou; 2, "Maritime Prince," Thos. Munro, New Glasgow; 3, "Baron Wood," R. E. Bagnall, Charlottetown.

Sec. 2.—Mare or Gelding in harness. 1, "Lady Sim," Mrs. F. M. Blenkhorn, Maccan, N. S.; 2, "Minnie," Herbert Downey, Amherst; 3, "Susie Wilkes," J. Clarence Purdy, Amherst; 4, "Sim," F. M. Blenkhorn, Maccan; 5, "Pay Day," Jas. L. Read, Amherst, N. S.; 6, "Lady Parkside," C. C. Black, Amherst; 7, "Nellie," Gideon R. Prescott, Amherst.

Sec. 3.—Matched pair, 1, "Joe Patchen and Maud Ferron," W. Lowe, Amherst; 2, "Doris B. and David", Geo. Goldsmith, Amherst; 3, "Jack and Rex," Walter Baker, Barronsfield.

CLASS IX.—CARRIAGE HORSES Over 15-1 hands high, in harness.

Sec. 1.—Stallion, in harness, 1, "Model Reformer," R. A. Snowball. 2, "Oakley Baron," W. S. McKie, Charlottetown; 3, "Sensation," Geo. R. Chipman, Grand Pre, N. S.

Sec. 2.—Mare or Gelding, in harness, 1, Banker, Geo. McAvity; 2, Don, Thos. Munro; 3, Major, J. S. Lowe.

Sec. 3.—Matched Pair, 1, "Senora and Senorita, Geo. McAvity; 2, Geo. M. Holmes, Amherst.

CLASS X.—SADDLE HORSES.

Sec. 1.—Saddle Horse, 15-1 hands or over ridden by a gentleman, 1, "Senora," Geo. McAvity; 2, "Guardian," G. W. Fowler; 3, "Rex," Walter Baker.

Sec. 2.—Saddle Horse, 15 hands or over, ridden by Lady, 1, "Senorita" Geo. McAvity.

Sec. 3.—Leaper, ridden by Gentleman, 1, "Guardian," Geo. W. Fowler, Sussex; 2, Murray Jones, Amherst, N. S.

CLASS XI.—CARRIAGE HORSES.

Sec. 1.—Mare or Gelding, 15-2 hands or over, 1, "Major," J. S. Lowe, Amherst; 2, Thos. Munro, New Glasgow; 3, "Jack," Walter C. Baker, Barronsfield.

Sec. 2.—Mare or Gelding under 15-2 hands. 1, Senorita, Geo. McAvity, St. John; 2, "Winona Dignity," W. W. Black; 3, "Rex," Geo. M. Holmes, Amherst.

Sec. 3.—Matched Pair, 1, "Senora and Senorita," Geo. McAvity; 2, "Jack and Rex," Walter C. Baker; 3, Geo. M. Holmes.

Sec. 4.—Tandem, 1, "Senora and Senorita," Geo. McAvity.

Sec. 6, for Champion horse in harness, 1, "Banker," Geo. McAvity, St. John, Silver Cup presented by Col. H. Montgomery-Campbell, President of the Maritime Stock Breeders' Association.

Sec. 7.—Combination Saddle and Carriage horse, 1, "Guardian" Geo. W. Fowler, Sussex, Silver Cup presented by the Terrace Hotel, Amherst, for best horse.

CLASS XII.—HEAVY DRAFT.

Sec. 1.—Mare or Gelding shown in single harness, foaled previous to Jan. 1, 1907. 1, "Pink Rose," Logan Bros.; 2, "May Lothian," R. A. Snowball 3, "Prince," Chas. W. Forrest, Amherst Pt.

Sec. 2.—Mare or Gelding shown in single harness foaled on or after Jan. 1, 1907, 1, "Bess," W. W. Black, Amherst; 2, "Victor," C. H. Black.

Sec. 3.—Team in harness, mares or Geldings foaled previous to Jan. 1, 1907, 1, Logan Bros., Amherst Point; 2, "May Lothian and Bess," R. A. Snowball;; 3, "Billy and Prince," F. W. Forrest, Amherst Pt.

CLASS XIII.—GENERAL PURPOSE

Sec. 1.—Mare or Gelding in harness, 1, Fowler Bros., Amherst Pt.; 2, "General" W. W. Black, Amherst; 3, "Fielding," W. P. Keilor, Amherst Point.

Sec. 2.—Team in harness, 1, Geo. M. Holmes, Amherst.

CLASS XIV.—AGRICULTURAL.

Sec. 1.—Mare or Gelding, shown in harness, foaled previous to Jan. 1, 1907, 1, "Minnie," Fowler Bros.; 2, Rufus Copeland; 3, "Dollie," John A. Embree.

Sec. 2.—Mare or Gelding, foaled during 1907, 1, "Prince," S. M. Stiles, Amherst; 2, "Major," Fowler Bros., Amherst Pt.; 3, "Billy," S. M. Stiles.

Sec. 3.—Colt or Filly, foaled on or after Jan. 1, 1908, 1, Edwin I. Forrest, Amherst; 2, Chas. Symes, Minudie.

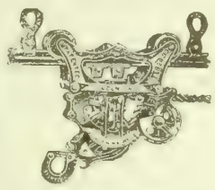
Sec. 4.—Matched team in harness, 1, Fowler Bros.; 2, Rufus Copeland; 3, John A. Embree.

CLASS XV.—PONIES.

Pony, in single harness, over 12 hands and under 13 1-2 hands, 1, "Doly," Della Horton, Amherst.

Louden's Barn and Stable Fixtures

Louden Junior Carrier for Steel Track.



Carriers for steel or wood track to work with Fork, Slings, etc., for handling Hay or Grain.

Carriers for cleaning out litter and handling feed in stables.

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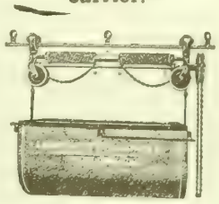
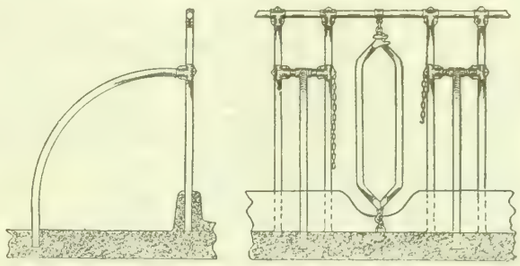
Louden Feed and Litter Carrier.



Cow Stalls and Stanchions, Neat, Clean, Strong and Comfortable.



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Louden Machinery Co., Guelph, Ont.

WRITE FOR CATALOGUE.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day as you may not see this offer again. Address:

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Special vs General Farming

A great deal has been said and written on agricultural problems,and in the natural course of events, always will be, so long as we possess individuality.

It would seem that the man, the soil and location must determine the advisability of special farming. If you have a city market at your door or surrounded by vast areas of marsh lands, meadows or intervals, that can be kept in good fertility by nature's work supplemented by man's common sense, we can conduct our farms on very different lines, that, generally speaking, cannot be applied throughout the Province. If there is one thing more than another that is being demonstrated on our average upland farms it is the economic principle of keeping our land in as thrifty condition, as our well kept stock.

The farmer who is making hay, grain or potatoes a speciality with commercial fertilizer, has perhaps met with a certain degree of success, but perhaps in years when hay was low managed to just balance accounts, and in years like the present when potatoes will hardly pay for the digging, will probably have to draw on his bank account, if he has one, to make ends meet. But we cannot grant that the farmer who is satisfied with just a living,no matter to him how he leaves the fertility of the soil, has been aiming at the highest principles of agriculture. If there is a profit in producing the raw material, there ought to be another profit in manufacturing it into a finished product, thus making our God given land doubly productive.

I believe in specializing, but not in the sense that the term "special" is understood in our discussion. Each locality according to its soil, climate and market opportunities should make that branch of farming that is best suited to that section, its main standby.

Suppose we are compelled to cart our produce four or five miles to a station and spend the day making two trips. Would it not be more profitable to utilize our time and horse flesh in hauling back to the land the manure, a gathering of one of the by products of our stock, which has also produced the finished article of butter, or butter fat, beef, steers, sheep, horses and pigs, yes and poultry which can be marketed for one-hundredeth part of the cost.

This brings us to general farming, which is one of very wide appreciation and may cover every branch of agricultural industry. It must in this Province, with its varied soils, and differently located farms, include a great variety of ideas, systems and methods.

We hear the argument used against general farming, that in our rush to attend to everything we neglect to give our best attention to any one branch, but right here is where individualism comes in.

The cow, let her be the dual purpose, or the pure-bred beef type, or of the highest milking type is the backbone of the general farm.

One farmer will take the dual purpose cow whose combination of milk and beef production should be blended somewhat towards a milking strain, he uses a hand separator and ships the butter fat to a creamery (where every farmer ought to ship it), and feeds the skim milk to the calves and pigs. The calves at one or two years old bring him a nice figure, the pigs six or seven months old, which have been allowed to forage in a clover patch, adds another bulge to his purse. In the meantime the soil fertility has been increased. No cradle hills or bushes in this man's pasture land, nor bulls eye for timothy and clover in his mowing fields. He ploughs often and plans to have the roots and corn on a clover sod and with plenty of barn yard manure, he will have no cause to worry about the weather. A few more potatoes is raised than will be needed if the market warrants their sale, if not they make good feed. With the feeding of all the hay and all the roughage on the farm, this general farmer is enabled to grow most all the short feed needed. The grocery and meat bills are met from the poultry yard. The profit from the strawberry patch, and other small fruits, will usually more than pay the wages. His draught work has cost him practically nothing, for this man is raising heavy draught colts as a side issue, and perhaps working three or even four of them together to do the work of an older team. They are growing and developing and as near maturity as possible, he is wise enough to sell, if not for what he asks, for what he can get.

Let us for a moment turn our attention to the dairy cow. There are three ways of marketing her milk: First, by selling all the milk to city customers. Second, to separate the cream and send to the Factory. Third, to manufacture into butter at home. In the last two places the pig must have an important place in the management, and thus the farmer is compelled to come back to general farming.

In the first instance the man who sells all the milk, saves the expense of separating the cream and manufacturing it into butter, his main object, no doubt, has been to produce a large flow of milk, regardless of its richness in butter fat. His herd has been closely watched and probably examined for disease. The milk must come up to the standard required by the law laid down by the city board of health, and while the comparison between the price for the milk sold and the price for the butter fat seems greatly in favor of the man who is selling the milk, his success depends upon the intelligence with which he has fed and cared for his cows, so as to produce the greatest yield of milk, marketed at the lowest cost, and last but not least, the progressiveness of the city and its surrounding country.

Another farmer will make a specialty of pure bred beef cattle, Durham or Hereford or some other beef type, and plans to profit by their superior breeding. Usually the calf is allowed to run with the cow, thus the profit from the milk must be looked for in the calf. Practically speaking, the only profit from this pure bred cow is her calf. Now it has cost as much to keep this cow as it has the dual purpose cow and without going to the figures and without allowing interest on the extra value placed upon the purebred the value of this pure bred calf must be placed against the by-products, less the extra work connected with the dual purpose cow. It is well known that even well bred stock does not always produce the quality expected. Should this happen it is worth only its beef value in the market. This farmer has sold nothing from the farm except the pure breeds. In this case his success depends upon his ability to make the farmers of the Province believe that it will be better for them to pay him his extra price, rather than to keep their grades.

Now what about the pure bred draught horse? If it is needful to keep the desired object we wish to attain, well in view in the breeding of our cattle, how much more,should a distinct and well defined purpose dominate our course in the desire to produce a first class specimen of a far nobler animal. Almost up to the last two or three years, the majority of the farmers have not realized this, and consequently a large number of draught horses are being imported to meet the demand. A few years ago an enterprising business man from our section went to Scotland and brought out a splendid type of a draught Stallion, and while he made the service fee comparatively small, only a few patronized him, because they could secure the service of a mongrel for less money. But as time went on, his progeny, from the grade mares, produced good colts in almost every case. This enterprising man, (per-

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R1074.—Summer Waist, made from a nice quality lawn, in white only. Dutch collar, cuffs and plait down front are of black and white shepherd's check. Both front and back of waist are finished with small tucks. Short sleeves. Sizes 32 to 44. Price ..... $ .75

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haps at a loss to himself) saved the horse situation in our district. We now have a splendid class of brood mares which are proving a source of income to our general farmers. But the farmer who undertakes to make the breeding of pure bred horses his main income, must be wealthy to start with, which will bar the most of us. It will cost more to raise them because there are not the same opportunities of making them earn their living in this mode of farming, as in general farming. All horses are liable to accidents and liable to go lame most any time, which will lessen their value, besides the market is limited for pure breds unless the progeny of the pure bred mare will make a much better work horse than the colt of the grade mares, it would seem unprofitable for many to make a specialty of pure bred horses.

There are many other branches that may be taken up in this discussion, but I have stated the most general ones, in as concise form as possible, for any one of the branches mentioned would afford material for an evening's discussion.

In conclusion let me say, that with our splendid educational facilities, and our Agricultural literature that is accessible to every home in the province there should be no excuse for a farmer not keeping abreast of the times.

Our farmer should be a student of general knowledge, studying with clear insight, crop statistics, market reports, supply and demand, both local and foreign, that he may market his products when they will net him the largest returns for farming is a business proposition pure and simple. The general farmer who has done this is enabled to meet any market condition, and if he has attended strictly to details in production, I care not whether he be a specialist, or a general farmer, he is solving the problem of successful agriculture in New Brunswick.

Paper read by Fred C. George, Sackville, before the recent New Brunswick Farmers' and Dairymen's Association.

Building up an Old Farm.

A Subscriber, Mt. U., N. S.—"I am trying to build up an old farm. I have been buying commercial fertilizers for raising oats and feeding oats, hay and other millfeeds to stock and spreading the manure on grass lands. W

Can I enrich the soil as well this way as I can by spreading manure on the oat ground and harrowing it in?

One objection I have to spreading the manure on the ground is that it makes the straw too heavy and it falls before the grain is ripened and again it takes up time in the spring just when we are busy with our work.

Would Nitrate of Soda and Land Plaster make good fertilizer?

As a plan to build up a farm I consider the scheme outlined defective. A much better plan would be to follow a short rotation on the best of your land, gradually bringing more land in till as much land as desired for cropping purposes were under the regular crops of the rotation.

As the most suitable rotation to follow I would suggest one of three or at most four years duration. The better would be a three-year rotation including one year roots, one year grain and one year clover hay. If absolutely necessary the field in hay might be left another year having prepared for this contingency by seeding timothy at the same time as to clover 10 lbs. clover, 12 lbs. timothy per acre.

In answer to specific questions I would say:—

1. Yes, putting manure on meadow is a surer way of getting returns in crop and soil improvement than is the applying of it to grain crops.

2. I would use land plaster very sparingly. In fact only when seeding down to clover use say 150 lbs. per acre. Nitrate of soda is a good fertilizer.

An Irish Priest's Suggestion.

"From the Rev. Thomas P. Hurley, a parish priest of County Cork, has come a suggestion which the Department of Agriculture,, N. S., will exploit during the coming year. According to Father Hurley twelve farmers placed in his hands the equivalent of $1, and with this money he purchased twelve excellent books on agricultural and horticulture. As these people lived near each other it was easy for them to use each other's books, andthus for $1 the little community each year was able to get a dozen excellent works the last word on the scientific development of farming.

"Secretary Wilson proposes to place orders with country doctors as well as with priests and clergymen. He will keep the heads of these distributing centres informed about the latest books which can be recommended, and from the large supply of free matter he distributes will give a generous quota to such communities as are getting together an agricultural library. Mr. Wilson believes in the co-operation of the farmer and his wife with other farmers and their wives and an exchange of ideas. He also would like to get established a literary bureau in his department which would receive and answer letters pertaining to farming subjects. New ideas which have proved successful could be passed on from one community to another. In the forthcoming recommendation Mr. Wilson calls attention to the fact that in Ireland the priests keep abreast of the times on new inventions and the best methods of farming, and that every priest's home contains agricultural and horticultural books which are consulted freely throughout his parish. He would like to interest American clergy in the good work of making better farmers out of their flocks."

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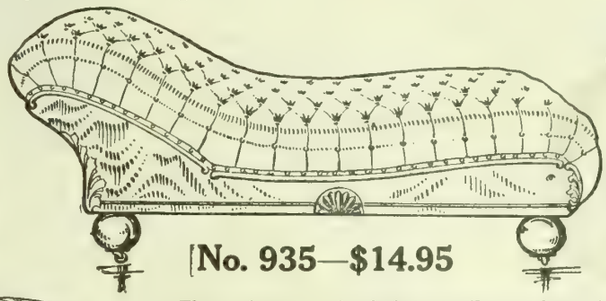
Just look at these three pieces of furniture—have you ever seen such wonderful value ? We are offering these pieces at these very low prices to introduce our large illustrated "Catalogue No. 8 500 photographic illustrations of the newest furniture are shown in this catalogue. It's a big book full of big bargains. You ought to have it.

Catalogue is Free for the asking.



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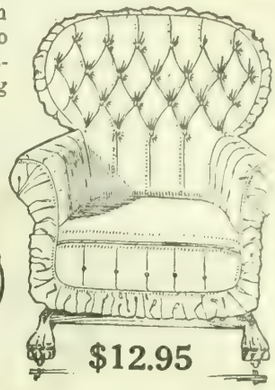

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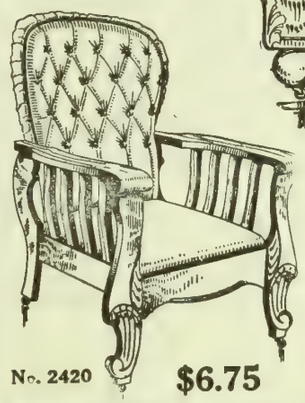

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THE PAQUET COMPANY LIMITED.

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ADVERTISE IN THE MARITIME FARMER AND GET RESULTS.

Seed Selection as Practised in Europe.

(Continued from page 365.)

from crossing artificially, after the type has been fixed, are each planted in a drill. The rows—each row representing the product of a single plant—are seven inches apart and planted to correspond as nearly as possible to field conditions, both as to soil and thickness of seeding. From the crop so produced, it is ascertained whether the type in each row is stable and also which of the individual rows have produced a progeny most nearly to the ideal desired. The few superior rows of plants are then increased on larger plots for further comparison and estimate as to yield. All the plots were completely surrounded with a strong-strawed variety of rye of dwarf habit of growth.

One or more of the most promising of these increase plots are again sown on still larger plots, also surrounded by rye, from which larger plots, more accurate determinations are made as to yield, strength of straw, quality of grain, rust resistance and maturity. Collateral tests are also made on lighter soils near Malmo and at the sub-stations 5 and 10 degrees north.

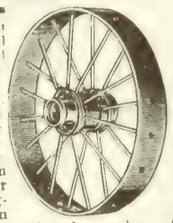
Our farmers who have been making a specialty of growing and selecting seed wheat, oats and barley would no doubt welcome any modification in the regulations of this Association, that would relieve them of some of the careful work that is now required of them at a busy season of the year. Perhaps very few of them would take kindly to additional work such as Prof. Nilsson is doing. But I would suggest that this Association gradually incorporate into its regulations the best part of Prof. Nilsson's method. I would strongly advise that the Association undertake, so far as it may be able, to provide members, particularly new members, with the best possible foundation stock that has been produced from an individual plant of outstanding merit.

My remembrance of that old adage, "Prove all things, hold fast to that which is good," precludes me from releasing growers of registered seed, under our conditions and careless practices in handling cereal crops in Canada, from the system of continued selection from year to year. To maintain the purity of variety and type, if for no other reason, the breeding plot, or "hand-selected seed plot" should be maintained. If, as Nilsson and other European breeders contend, the nature and amount of varieties from an individual plant is so small from year to year, that even specialists are scarcely able to take advantage of it to secure further improvement, then this Association might very well allow its members who are growing wheat, oats and barley to take their crop from their hand-selected seed plots into their barns and select from the sheaf on wet days and thresh by hand enough good, pure seed to sow a quarter acre, or even a two or three acre plot, which should be continued from year to year as a base of supply of pure seeds. That would relieve seed growers of their principal excuse for not continuing with the selection according to the present requirements.

It seems to me, and in that particular I think I have expressed myself at the last two annual meetings of this Association, that the work of isolating these individual plants of merit can best be done by men who spend all or nearly all their time in a study of the characteristics and capabilities of these plant units of one or two kinds of crops. It is true that there are some farmers who are now making a specialty of growing seed and who not only have the ability but will find the time and adopt the proper methods to produce new sorts from individual plants of merit which they may discover. But this is a work which our farmers have a right to expect of the experts who are employed by the Federal and Provincial Governments or other institutions.

An address by Geo. H. Clark, Seed Commissioner, Ottawa, before the Annual Meeting of the C. S. G. A.

The wide tires on Dominion Low Steel Wheels save roads and make hauling easy. Won't rot, like wooden wheels, are stronger and guaranteed not to break in rockiest road or coldest weather. Can be taken apart and repaired. No boxes in hubs to become loose or break. Lighter, stronger and cheaper than wooden wheels. Make work twice easier.



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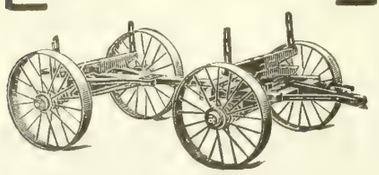

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Don't, through lack of foresight now, run any risk of making valueless at harvest time the hours of labor spent in preparing for it.

Be prepared to get all the crop with a McCormick.

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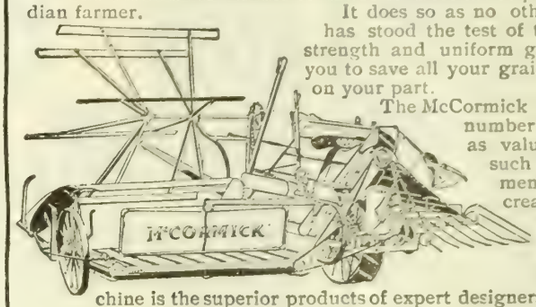

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Look over your machines today. See what you need to properly handle the harvest this year. Then call on a local dealer or write direct for further information. Take the step now that will insure your getting all the profit from your harvest.

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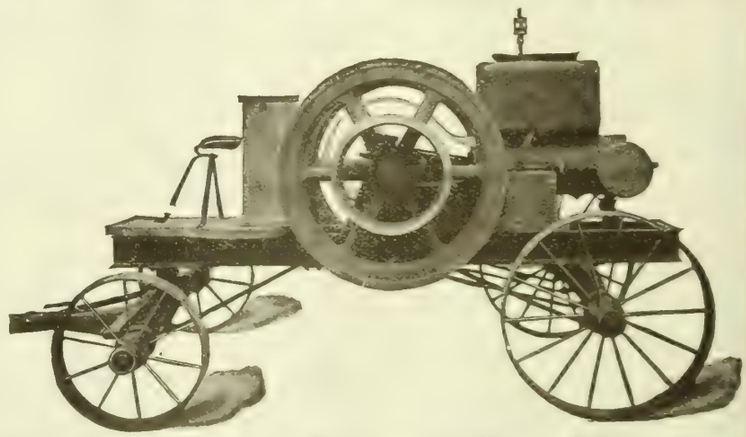
Gas and Gasoline Engine.



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Our reputation for producing the highest grade engines, for fair dealing and liberal courteous treatment and Low Prices, is one of our most valued assets.

Ask for our large Catalogue; get our prices; compare Engines and Prices and you will decide in favor of the Gilson Engine, because it is the BEST and CHEAPEST as well.

Do not allow a dealer or agent to sell you another make that is "Just as Good" as a "GILSON." Insist on having a "GILSON" and you will never regret it. Your dealer or agent makes more money by selling you an inferior machine, but what he makes, you loose.

Remember we absolutely guarantee every engine we produce.

Gilson Mfg. Co., Ltd., 127 York Street, Guelph, Ont.

Empire Cream Separator Co., Sussex, N. B., Maritime Agents. 2290

Possibilities of Fruit Crowing in the St. John Valley.

Fredericton, N. B., Mar. 24.—The members of the Legislature had a practical and impressive demonstration this week of the possibilities of the St. John River Valley as a fruit producing section. On Wednesday afternoon as the members entered the Assembly Chamber each found upon his desk a plate of apples, tempting in appearance, delicious in flavor and generously distributed. A ticket beside each plate bore the legend, "St. John River Valley Apples from the orchards of James P. Belyea and George McAlpine, both of Lower Gagetown, Queens County. Compliments of A. R. Slipp, M. P. P." On the Speaker's table was a particularly attractive plate of six large McIntosh Reds, the fruit which at the present time is selling on the London market at ten cents apiece.

The display comprised specimens of MacIntosh Red, Fameuse, Bishop Pippins, Baxter, Ben Davis and Northern Spy. The fruit although kept in only an ordinary cellar was firm, yet mellow, and was of delicious favor. In all some sixty plates were distributed and the display was very highly commented upon. It was really instructive to many of the members, who while passively assenting to the optimistic statements of those who predict a great future for New Brunswick as a fruit producing province yet have but slight personal knowledge of the possibilities in that direction. This action of the energetic member for Queens, coupled with the activity manifested by the Provincial Horticulturist, will materially advance the fruit production in the immediate future. If the approaching season is a favorable one for apple growing the Fruit Exhibition to be held in St. John next fall will surprise the world, both as regards quantity and quality of the displays.—Moncton Times, Mar. 29, 1910.

To Prevent Horse from Gnawing Rope.

I have found that by painting the woodwork with coal tar the worst wood-gnawing horses would never bite it afterward. The tar should be put on while hot. An old broom or whisk brush may serve as a paint brush. I have also found a way to cure a horse of biting his halter strap or rope by boiling the rope in water in which a bar of cheap washing soap has been dissolved. This remedy tried on several horses which I have owned never failed. One horse, when I first got him, would bite a heavy rope in two almost as soon as tied. A small soaped rope cured him completely. That was nearly ten years ago and it has not been necessary to tie him with a chain since.

Oil Meal for Calves.

Subscriber, N. B.:—How should oil meal be prepared to get the best results when fed to calves? Please answer through your most excellent paper.

Answer.—Oil meal may be fed to calves in its finely ground condition, or, what is better, the oil cake ground coarsely and sold under the name of pea size oil cake. The latter is less liable to be adulterated and can be fed to better advantage. It should of course, be thoroughly mixed with other grains and care must be taken that it is not fed in excess. It would be safer to give the calves at first not more than one-fourth pound each per day.

MOVING PICTURES
OF DAN PATCH 1:55

ABSOLUTELY *FREE* POSTAGE PAID

If you are a Farmer, Stockman or Poultry Raiser and correctly answer, in your postal card or letter reply, the specified questions.

THIS IS THE LATEST SENSATION AND GREATEST TRIUMPH IN THE GREAT MOVING PICTURE ART.

It is a *New Invention* that you can carry in your pocket and show your friends instantly, day or night, either once or a hundred times, and without a machine, curtain or light. It is the first successful moving picture ever taken of a World Champion Horse in his wonderful burst of speed. The original film contains

2400 INSTANTANEOUS PICTURES OF DAN PATCH

and every picture shows the King of all Horse Creation as plainly as if you stood on the track and actually saw Dan Patch 1:55 in one of his thrilling speed exhibitions for a full mile. 2400 distinct moving pictures taken of Dan in one minute and fifty-five seconds means twenty-one pictures taken every second all of the way around the entire mile track from the back seat of a high power automobile. You can see Dan shake his head to let his driver know that he is ready for a supreme effort and then you can watch every movement of his legs as he flies through the air with his tremendous stride of 29 feet. You can see his thrilling finish as he strains every nerve to reach the wire, you can see his driver dismount and look at his watch while thousands of people crowd around, you can see his caretaker force his way through the crowd and throw a beautiful woolen blanket over Dan to prevent his catching cold and then you can follow him up the track before the madly cheering multidudes. As a study of horse motion it is better than the actual speed mile because you can see Dan right before you for every foot of the entire mile. When first shown to the public this marvellous picture caused people to stand up all over the theatre calling "Come on Dan"—"Come on Dan."

This remarkable moving picture is the most realistic and the most thrilling ever presented to the public.

We have taken a part of these 2400 wonderful and sensational pictures and made them into a *Newly Invented Moving Picture* that you can carry in your pocket and show to your friends at any time, day or night. It does not need a machine, it does not need a curtain and it does not need a light. It is all ready to show instantly either once or a hundred times and creates a sensation wherever shown.

THIS MOVING PICTURE WILL BE MAILED TO YOU ABSOLUTELY FREE, WITH POSTAGE PREPAID, IF YOU ARE A FARMER, STOCKMAN OR POULTRY RAISER, AND CORRECTLY ANSWER THE THREE QUESTIONS.

YOU MUST ANSWER THESE 3 QUESTIONS IF YOU WANT THE MOVING PICTURES FREE

1st. In what paper did you see my Moving Picture Offer? 2nd. How many head each of Horses, Cattle, Sheep, Hogs and Poultry do you own? 3rd. How many acres of land do you own or how many acres of land do you rent?

I will not mail this wonderful moving picture of Dan Patch 1:55 free unless you are a Farmer, Stockowner or Poultry Raiser and unless you correctly and honestly answer the three questions.

IF YOU ARE NOT A STOCKOWNER AND WANT THE MOVING PICTURES SEND ME 25 CENTS.

In silver or stamps to pay postage, etc., on Moving Pictures. I will mail this wonderful Moving Picture of Dan Patch 1:55, the fastest harness horse the world has ever seen,—to you if you send me Twenty-five Cents in silver or stamps even if you do not own any stock or land. It costs about $2700.00 cash to have one of the original pictures taken and reproduced. ☞Write me to-day so that you will be sure to secure one before my supply is exhausted.

Address E. B. SAVAGE, Proprietor of
INTERNATIONAL STOCK FOOD CO., TORONTO, CAN.

Largest Stock Food Factories in the Entire World
Cash Capital Paid in $2,000,000

48

Garden Seeder.

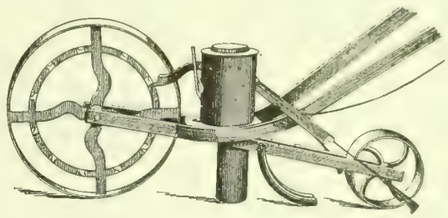
"The Handiest Machine Around the Farm"

Everyone who has used them say so.—No better Seeder can be built for the accurate and fast sowing of Turnip, Cabbage, Sage, Carrot, Onion Parsnip, Spinach, Beet, Pea, Corn and all kinds of Garden Seed.

ALSO

Little Giant Threshers,

Trenholm Hay Press.



This Seeder is built to last a lifetime—Works easily

THE CHEAPEST FEEDER ON THE MARKET.

If there is no Agent in your district handling these, write directly to the factory. We deliker them, freight prepaid, to any station in the Maritime Provinces.

The Sussex Mannfacturing Co., Ltd.

SUSSEX, - - - N. B.

Advertising in the FARMER brings results. Tell your friends about it.

We Want Beef.

(Continued from page 366.)

tween the turnip field, the feeding stock, and next year's turnip crop. As a general rule, it is better to improve the farm by buying feeds, than by buying commercial fertilizer.

Much is lost by improper care of manure. It should not be allowed to heat, but should be drawn out on the land as soon as possible.

One advantage our country offers for the raising of beef, is the large area of fair to good pasture, to be found in the meadows, swails and commons that is not easily available for any other stock, except young cattle.

I believe young stock will do better to be turned out as soon as the weather will permit in the spring, providing always, that they are not exposed to cold or rain, and have plenty to eat. Young cattle on rough pasture and brouse, will eat readily, feed that is not palatable, when fed in the stable.

By turning out as early as they can be comfortable, they are not subject to the effect of the sudden change, they are when kept in the barn until the feed is so they can readily gorge themselves; and they are not as sensitive to the flies and mosquitoes.

Young stock should be housed early, and not subjected to the cold storms and sudden changes our fall weather brings.

There is but little nutriment in frozen grass. It should be the aim of all owners of young stock to have them come into the barn in good condition.

The temptation to after feed closely should not be yielded to, as a general thing. There are several cheap fall fodders that may be easily provided to suppliment the pastures when they loose their succulence, such as a patch of white turnips, corn and rape. Then the turnip tops furnish a lot of good feed, not suitable for the milch cow except when fed with care and moderation.

Cattle have large stomachs and plenty of them; so it is not necessary to feed often or to disturb them during the night with a lunch.

I believe two meals a day are enough. I do not mean all an animal can eat. should be dumped into its manger at one time but feed hay or straw first, when the animal has eaten this, water, taking for granted water not being in the ordinary barn, the animal has to be turned out, when it comes back into the barn feed more hay. After it has eaten all it wants, clean its manger out, and give it roots and grain feed. This may be a feeding of two or three hours, but should result in the animal being thoroughly satisfied, and with a comfortable stable should soon be resting easily where he may be left until late in the afternoon when the same proceedure may be repeated.

When roots are fed plentifully it is not necessary to water more than once a day. Laziness is a virtue in fattening animals. Keep the stock comfortable, and do not disturb unnecessarily between feedings.

The producer should always have the ideal type of beef animal in mind and aim as far as he can to attain it. The animal with a short and broad head, open nostrils, large mouth, strong jaws, all indicating health, strength and capacity; short chest wide and deep, short legs, width without coarseness, with straight upper and lower line, hind quarters long and well filled, the whole outline of the trunk or body proper forming a parallelogram."

The time for marketing the beef animal should be controlled by the conditions surrounding the producer; if provided with much good pasture and limited feed for winter, it may be advisable to sell in the fall; if on the other hand the winter fodder is more plentiful than pasture, they may be more profitably marketed, during the winter, spring or early summer when the price is highest. They should be most profitably disposed of at from two to three and a half years old.

Farmers should do their own thinking, study their own peculiar circumstances, and allow their neighbors the same privilege.

Much is lost to the farm in man and method, by fathers not encouraging a spirit of prudent experimting among their boys. M

Careful thinking and investigating conditions will result in much satisfaction and some good to the boys. And when some fine morning the young farmer turns out for market a bunch of well-shaped, well finished steers, he will wear a smile that does not have to come off, and he will enjoy a satisfaction that the town workman, the manufacturer, or the man in the office does not have over his finished work. He will know a true, deep satisfaction and feel the dignity and pleasure of his vocation, as not only the equal but the superior of some possibly more remunerative occupations.

Most of the farms vacant or for sale to-day, are the ones that crops have been sold from. The farms where the crops were manufactured into the finished product of the dairy, beef, pork, poultry and the like are the farms where the farmer spends his last days under his own roof. "Where peace and plenty sit as guests, beneath the farm house shade."

I think it is a pitiful sight to see an old man, sitting on the banking of a rented house, dreaming of better days and seemingly waiting for death's evangel to bring release, when his last days should have been his best.

And his children who are responsible for the condition are servile to the shrill tones of the factory whistle, when they might have been workers together with God and nature and have had a claim on the world's best.

SAMUEL FREEMAN.
Cumberland Co., N. S.

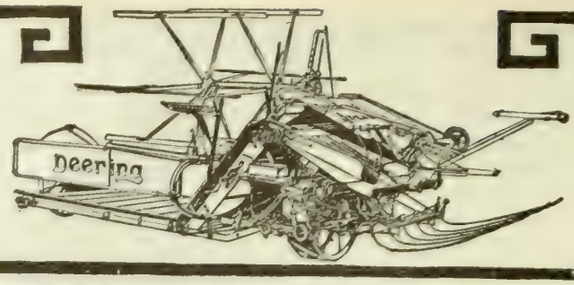
Immigrant Rush Over the I. C. R.

Record Number of Trains in the Past Month.

The rush of immigrants through Halifax has kept the Intercolonial officials busy providing means of transportation, and although the demand for trains has been large there has been no delay in this respect. So far this season there have been despatched from Halifax thirty-five more special trains than for the same period last year. Last week there were several trains daily to the Hest.

That this season will be a record one for the number of immigrants landed in Halifax from Europe and despatched over the I. C. R., en route west, is quite evident by the way the new settlers are being rushed in during the last few weeks. For the past two months all the passenger steamers have been bringing large number of passengers and every boat is bringing a few more than the one that preceded her. Last week was the busiest yet, about 5,000 passengers having been landed at Halifax, and sent forward to their destinations. The Immigration and Railway officials have been kept busy and the immigrants have received quick despatch.

The Italian steamer Campania is now on her way to Halifax with about 2,000 and will be due this week. A large number of her passengers will be landed at Halifax, and the remainder taken on to New York.



GET ALL THE CROP THIS YEAR

THINK back to the last harvest time. Did you get all the profit from your acres that should have been yours? Or through delays, caused by tinkering with broken-down or inefficient machines, did you lose valuable time? Did you get all the grain—tangled or down—or did your machine leave a part of your profit in every field? Ask yourself today. Did I get the best results possible from my harvesting machines last year, and, if so, are they in condition to give me the same service this year? If not—

Now is the time to choose the machines that will get all the crop this year in the shortest time—with the least effort on your part. That means the Deering. They are machines that will give you the very best service. They are built to meet the conditions encountered on Canadian farms.

The Deering binder is a model of convenience for operating. It is a strong machine. You will not be troubled with breakages. It has light draft and has such a wide range of adjustment that it is adapted for all conditions of grain and fields.

You will be sure of satisfaction with a Deering. It is a proved machine. In addition to binders, the Deering line comprises various other machines in harvesting and haying machine lines, seeding and tillage implements. The Deering local dealer handles I H C gasoline engines, cream separators, manure spreaders, wagons, hay presses and motor vehicles.

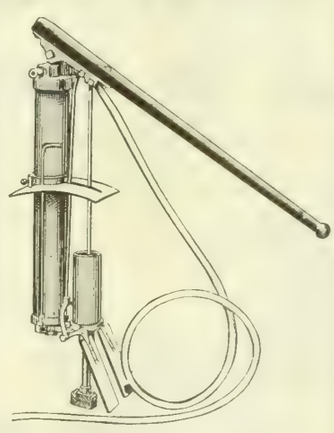
Investigate the Deering line. Learn what Deering machines will do for you. Call on local dealer for catalogue and particulars or write to nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A
(Incorporated)

THE I-H-C LINE

LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY



Listen to What a Middleton Man has to Say About the "Perfect" Spray Pump.

"DEAR SIR :—I want one of your No. 2 Spray Pumps, all brass, for my own use. You may place it to the credit of your sprayers that I am ordering one while I still have a good pump of popular make. I have had great pleasure in pointing out the excellent features of your pump. I was the first one to import and use a spray pump in the Valley. This was twenty or more years ago. I know about all the pumps in use. They all have one or two good points combined with some very objectionable ones. Yours has the good points of them all with the undesirable ones left out. When I say this, I speak from experience and can say nothing stronger in favor of your machine, unless I say that I consider it our patriotic duty to encourage the mechanical genius of one of our own countrymen."

Yours very truly

G. C. MILLER.

The 'Perfect" Spray Pumps are manufactured by
R. B. Westhaver, Mahone Bay, N. S.

Farm For Sale.

Two hundred acres. Thirty cultivated, twenty intervale hay land, two in orchard and buildings; remainder woods (maple, hemlock, birch and beech) with plenty of room for summer pasturing. Twelve roomed house, heated by wood furnace. Barn 64x30, room for 8 cows, 3 horses; also two box stalls and grain room. Manure cellar underneath. Wagon shed, ice and hen houses, workshop and sundry outbuildings. Water piped into house, tap and sink in scullery and dairy, and two drinking puncheons near stable. Horse, mare, two cows (in calf) small pen of fowls, Bain wagon, sled, buggy, double and single harness, some oats, hay and straw and all furniture will be sold.

A bargain for cash as owner is leaving Canada. Address.

N. Z., Maritime Farmer, Sussex, N. B.

History of the Clydesdale Horse.

(Continued from page 363.)

Clydesdale breeding on a large scale (at one time 350 mares), in Alberta, on the Walrond Ranch, for a quarter of a century, and my experience warrants me in saying that, if selected from dams sound themselves, and having no hereditary strains of unsoundness, using a sound sire, also free from hereditary taint, Clydes can be bred sound, and such, barring accidents, will remain sound through life.

From a professional standpoint, too, I can say that Clydes, properly kept in healthy surroundings, will resist, more than any other breed, the ordinary infectious diseases, and, as a rule, will recover quicker and more completely when attacked by them. Clydes, properly fed during colthood period, will mature and do light work as soon as any other breed,and sooner than most. No other breed is easier to break; as a matter of fact, most properly-handled Clyde colts will take to farm work as a pointer dog or a setter will to pointing or setting.

In the show-ring, no other breed of heavy horses can make such an imposing display, a fact that is being demonstrated year by year, by the increasing interest shown in them at the great New York show in Madison Square Garden, and the Olympic, in England. I think Clydesdale breeders are much indebted to the Nelson Morris Company for what they have done in showing their magnificent team of six Clydes. I believe the time has come when Clyde breeders must do more to keep the breed to the front, or they will suffer a temporary backset, so much is being done to push other breeds. But history repeats itself. I have seen so many attempts to push certain breeds of animals to the forefront. The Shorthorn, the Hereford, the Polled Angus, the Galloway, in cattle, all had their day; the Thoroughbred, Standard-bred, Hackney, Clyde, Shire and the Percheron, all had their innings; but the Shorthorn bull in cattle, the Thoroughbred in light horses, and the Clyde in draft horses, top them all. They produce an improvement, no matter what they cross, and this can be counted on, whereas my observations lead me to believe that this cannot be truly said of any other breeds.

My advice, based on long experience and observation, is, to the farmer, stay with the Clyde, but select the best sire and dam to breed from; for, like every other breed, they can be degenerated by errors in selection and mating, and very readily by neglect and mismanagement. Don't breed from the pedigree only; "like begets like," and individual excellence should be sought for in selecting both sire and dam.

CREAM WANTED.—We wish to call attention to the ad. of The Standard Creamery Co., which appears for the first time in this issue. This enterprising firm has taken over the business and premises formerly operated by the St. John branch of the Maritime Dairy Co. The business is conducted by men who have had considerable experience in the creamery line in all its branches and have had singular success in giving satisfaction to the farmers. Parties having cream to dispose of will do well by patronizing this company.

Calves **Raise Them Without Milk.** Booklet Free. A. A. Archibald & Co., Truro, N. S.

Making Hens Pay.

Will be easy of accomplishment if the right foods are used

Our foods are perfectly adapted to their different uses

Scratching Food, Laying Food,
Chick Food, Alfalfa,
Bone Meal, Beef Scraps,
Oyster Shell, also Crystal Grit,
Napcreal, Lice Paint,
Roup Cure, Nest Eggs,
Drinking Fountains, etc.

Write us for prices and other information. Address :

W. H. THORNE & CO., LTD.,
POULTRY DEPARTMENT.
Market Square, - - ST. JOHN, N. B.

THE LARGEST

DISPERSION SALE

OF REGISTERED

AYRSHIRE CATTLE

EVER HELD IN CANADA AT

"GLENHURST," FARM, WILLIAMSTOWN, ONT.

ON

Wednesday, April 20th, 1910

Dragon Main's Guarantee, 26337. Silver Lass of Glenhurst, 25020. Floss 3rd of Glenhurst, 16313. Floss 5th of Glenhurst, 29870. Glenhurst Fay, 29862.

80 HEAD OF CATTLE.

"Glenhurst" is two miles from Summertown Station, G. T. R. Trains from west arrive at 8.18 a. m., and from east at 11.35 a. m. Teams will meet trains from each way day of Sale. Trains leave after the Sale, going east at 5 p. m., going west at 6.15 p. m. Ample accommodation for those wishing to see stock before day of sale. Write for catalogue.

CAPT. E. ROBSON, Auctioneer.

JAMES BENNING, "Glenhurst" Farm, Williamstown, Ont.

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwich, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N.B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

R. J. Messenger, Bridgetown, N. S.
John A. Hughes, Petitcodiac, N. B
The S. H White Co, Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex N. B.
Syd. J. Goodliffe, Sussex, N. B.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son, Chipman's Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N.S.

Oxford Down

Fred. S. Black, Amherst, N. S.

Cotswolds.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.

SWINE—Berkshire.

Howard W. Corning, Cheggogin, Yarmouth Co, N. S.

Yorkshires.

The S. H. White Co, Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yar. Co., N. S.
S. J. Goodliffe, Sussex, N. B.
Boyd A. Wetmore, Harvey, Albert Co. N. B.

Chester Whites.

W. H. Moore, Scotch Lake, N. B.
Howard W. Corning, Coeggogin, Yarmouth Co., N. S
W. C. McLeod & Sons, Loch Lomond West, N. S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.
S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns.
W. J. M McLeod, Loch Lomond, West N. S, Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J McLEAN & SONS. Hopewell. N. S.

SHORTHORN BULLS for sale. WALTER EATON, Upper Canard, Kings, N. S.

FOR SALE.—Shorthorn bulls from 5 to 17 months.—ISAAC CHIPMAN & SON, Chipman Corner, N. S.

FOR SALE.—Registered Chester White Pigs, $5.00 at six weeks old; 800 pound sire—WALTER S. COGSWELL, Centreville, N. B.

YORKSHIRES, registered; $5.00 at five weeks; best breeding; satisfaction guaranteed.—R. J. MESSENGER, Bridgetown, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—One Guernsey bull, one year old, grand son of Cassiboro's Anchor, 9685, A. S. C. C. Apply to WILLIAM COX, Canard, Kings Co., N. S.

WANTED.—A man to attend to three cows, two horses and poultry and do other general work. For further terms and particulars appiy to R. C. S. KAULBACH, Lunenburg, N. S.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

WANTED.—Persons to grow mushrooms for us. Small waste space in yard, garden or farm can be made to produce from $15 to $25 per week. Write for illustrated booklet and full particulars.—MONTREAL SUPPLY CO., Montreal, Que.

THREAD POWER FOR SALE.—I have a two horse Moody thread power that I will sell cheap and on easy terms. The thread power is in a good state of repair and has not been used extensively. For particulars, write "Power" care MARITIME FARMER, Sussex.

Eggs for Hatching

From the Great **Layers—Rose and Single Comb Black Minorcas.** At the recent Amherst fair with **8** birds entered we won **6 First Prizes** a **Second** and **Third.** The heads of each of our pens are first prize Boston and Pittsburg Cocks as well as some of our females. Write for Mating list.

25 FOR $7.50

Baby Chicks and Lullaby Brooder

We save you the hatching.
Choice of 6 Breeds.

We have a full stock of Poultry foods,
Purina Baby Chick Food,
Fresh Ground Alfalfa Meal,
Kingsdale Improved Leg Bands.
Write for Circular and Prices.

Delivery Guaranteed. Incubators and Brooders and all supplies.

KINGSDALE FARM COMPANY, SUSSEX, New Brunswick.

PURE BRED Chester pigs for sale, F. H. COPP, Port Elgin, N. B

PURE BRED Yorkshire pigs for sale. Apply to F. E. SHARP, Midland, N. B.

S. C. B. LEGHORN and White Pekin Duck eggs at $1.00 per setting. Mention this paper. C. Y. YOUNG, Digby Co., N. S.

ROSE COMB Brown Leghorn's eggs for hatching, $1.00 per 15. Prize winning stock. WALTER S. COGSWELL Centreville. N. B

FOR SALE—120 egg Chatham incubator and outdoor brooder. A snap at $12 F. O. B. EDWIN J. TUCKER, Middleton, N. S.

FOR SALE.—A choice lot of pure bred Berkshire pigs ready to ship. Prices reasonable ALBERT PAYNE, Kane P. O., Glo. Co., N. B.

SEED POTATOES FOR SALE—Green Mountain and Summit varieties 50c. per bushel. F. O. B Upper Dorchester I. C. R. N. MACKELVIE, Rockland, N. B.

SEED POTATOES grown on high dry land. Specially selected, 75c per cwt. F. O. B. Early Early Ohio. Medium, Carman No. 1. Late, Deleware. WM. H. MOORE, Scotch Lake, N. B.

200 ACRE FARM FOR SALE with stock and tools. Good buildings, 8 acres of interval goes with farm. Will sell for two-thirds value Apply to EDWARD DUROST, Upper Jemseg, Queens Co, N. B

WANTED.—An experienced implement or separator traveller for New Brunswick. Salary and expenses to right man. Give reference and experience. Correspondence treated confidentially. Address Box D, MARITIME FARMER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables etc, Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

WANTED —A reliable man in every locality in Canada with rig or capable of handling horses, on salary or commission, $15.00 a week and expenses, with advancement, introducing and advertising our Royal Purple Stock and Poultry Specifics, putting up our bill posters, 7 by 9 feet, selling goods to merchants and consumers. No experience needed. We lay out your work for you. Write for particulars.—W. A. JENKINS' MFG., CO., London, Ont

For Sale.

Ayrshire Bull Calf 'Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

JAMES BARRETT,
Hill Grove Farm,
Crouchville. St. John, N. B

Strawberry Plants. Raspberry, Blackberry and other small fruits. Large, thrifty, young plants. Best varieties, lowest prices. Satisfaction guaranteed, catalogue free.

E. L. Colpitts,
Box 10. - Petitcodiac, N. B

Dont Go West.

Buy a farm in the beautiful St John Valley or elsewhere in New Brunswick. We offer several nicely situated farms in close proximity to good markets, schools, churches etc. Send for list

F. W. SHORT,
Brown's Flats, N. B.
Representing Maritime Real Estate Co.

BEE-KEEPING PAYS

best under modern methods. Large profits from small investments. Any one can learn and get fair crops of honey first season. Books of instruction, Bees, Queens, hives, sections and comb foundation at lowest prices. Price list free. E. L. COLPITTS, Box 10, Petitcodiac, N. B.

Perfection Ideal Band

It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c 25 for 20c, 50 for 40c. 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

PURCHASERS
—OF—
Holstein-Friesian Cattle

Take notice that for the purpose of facilitating the sale of Cattle by correspondence, where buyer and seller are widely separated, the buyer may make application to the secretary of the association for the inspection of the animals selected by him, the application to be accompanied by a fee of $5.00 for the first animal and $1.00 for each additional animal to be inspected in the same herd, and by the letters received from the seller, and on receipt of such application the secretary shall send an official to inspect the animal or animals, before shipment, to ascertain if they have been fairly described.

G. W. Clemons, St. George, Ont.
ec ret ary Holstein-Friesian Association.

EGGS that will give you winners at the fall shows in 1910. I have mated up three yards of single Comb Buff Orpington birds. Every bird in these yards are Exhibition show birds of large size and great layers and Buff to the skin, and from the best strains in the world. Eggs, $2.00 per 15 or $3.50 per 30 eggs. Unfertile eggs replaced at half price.

Tantramar Orpington Farm,
Box 31 Sackville, N. B

MAPLE FOREST STOCK FARM.
AYRSHIRE CATTLE
AND YORKSHIRE SWINE.
ADDRESS:
S. J. GOODLIFFE, - Sussex, N. B.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Meadow Brook STOCK FARM
CHATHAM, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires
Importers and Breeders of Pure Bred Clydesdales, Hackneys and Shorthorns.
We invite your inspection of Stock
John Bennet, Supt. J. B. SNOWBALL & CO., Ltd., Props.

267 Eggs in 365 Days

is the wonderful and unbroken record made by the Barred Plymouth Rock Hen,

Columbia

who was the foundation of the greatest Egg-producing and Prize-winning strain of Plymouth Rocks in the world to-day. Weight of females, 7 to 10 pounds; males from 8 to 11 pounds. Eggs for hatching for sale every month in the year and a few choice breeding birds on hand now, as we are practically done hatching this season.

For prices and photos apply to the Originator and Breeder of this wonderful strain of fowl. Satisfaction guaranteed.

P. A. PEARSON,
CALAIS, - - MAINE.

Gold River Farm Poultry Yards.

Eggs for Hatching from

Houdans,
Silver Grey Dorkings,
R. C. Rhode Island Reds.

Our yards contain birds of show quality and high individual merit.

Book your orders early.

W. J. M. MacLEOD,
"Gold River Farm,"
LOCH LOMOND, WEST, N. S.

Shorthorns For Sale.

One pure bred bull 8 months old. one pure bred heifer 8 months old, one pure bred heifer 2½ years oldt one pure bred cow 4 years old. The first two are sired by Emma's Fashion The last two are in calf by Emma's Fashion. Apply to

CHAS. B. TAIT,
Oxford, N. S.

Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.

Correspondence solicited.

WM. ERB, - Sussex, N. B.

Dollars and Cents

are what you are after. You can make them with a GOOD Incubator and Brooder. You can loose them with a poor outfit. Does your boy want to start in business? Let him write to me. Credit if you want it. J. B. DAGGETT,
Tracy's Mills, Car. Co., N. B.

English Potatoes for Sale!

Ideal Early and Discovery, late main crop potatoes, I dug 24 barrels from one barrel planted last year. No disease, while other varieties rotted. Grown three years in this country. Will keep until June. Apply to

C. H. Giles, "Brooklands" Fredericton, N. B
'Phone 2100. P. O. Box 119.

FOR SALE.

Ayrshire bull fit for service. Four Ayrshire bull calves, Ayrshire females any age. Thirty-five head to choose from. Intending purchasers met at railway depot. Book orders for Chester White swine, Long distance phone in residence, J. FRANK ROACH,
Sussex, N. B

Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching from me, My Reds are imported from the United States and were winners at Sussex. Halifax, Fredericton and Amherst Winter Fair in 1909. Prices on application.

Thomas S. Kyle,
Sussex Corner, New Brunswick

Business is What We Mean.

You can get an Incubator and Brooder from us and we will give you time on it. We have three prices, 50c, $1.00 and $2 00 Eggs. We will be happy to tell more about it.

Hartland Poultry Yards, Hartland, N.B.

Milking Shorthorns!

I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

Bliss M. Fawcett,
Sackville, - - N. B.

Eggs! Eggs! Eggs!

For Hatching.

From stock that won the big silver cup for "best exhibit at the Maritime Winter Fair" at Amherst. No better in Eastern Canada. Drop a line and get our mating list. Half price what you pay for Ontario and American eggs of the same quality. B. P. Rock, White and Brown Leghorn cockerels for sale.

SETH JONES,
Box 39, - - SUSSEX. N. B.

Farmers, Attention!

We have in stock at present and for sale a few Ayrshire and Guernsey Fresh Milk Cows, young —also some Heifers of both breeds, from one month to two years old. We have likewise decided to dispose of our flock of Shropshire Ewes, Rams and Lambs. All the above are first class stock and registered in the highest registration in their respective classes. Prices right, Call on us or write. Would be pleased to meet prospective buyers, either at Bloomfield Farm or at the coming local exhibition—Colchester and East Hants—or the Provincial Exhibition.

John McDonald & Son,
Bloomfield Farm, - Shubenacadie, N. S.

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

Eggs for Hatching,

From S. C. and Rose comb R. I. Reds, Columbian Wyandottes and Black Javas. Write for mating list.

W. H. Henry, Shubenacadie, Nova Scotia.

Spring Brook Farm Ayrshires.

This herd won 1st, 2nd, 3rd in the aged cow class at the Maritime Winter Fair Dairy Test Amherst, 1909, 2nd, 3rd, 4th in the three-year-olds, also 2nd, 3rd, 4th, in 2-year-olds. We have some bull calves to offer, also females all ages.

McIntyre Bros., Sussex, N. B.

FOR SALE.

Three Pullets, 1 Cockerel, 1 Cock, 1 Hen, S. S. Hamburgs; $5.00 takes the lot. Good stock.

Hatching Eggs, White Rock, S. C. R. I. Reds, $2.00 per 15.

Mailing list ready now. A card brings one.

Model (Cyphers), Incubators and Brooders at cut prices.

THE BURLEY POULTRY COMPANY,
46 Princess Street,
St. John. - - N. B.

Clydesdale Stallion For Sale.

Clydesdale Stallion, Juneday, foaled June 1st, 1908, sire, Flas hFavorite, Dam, Felicia, both imported by Nova Scotia Government, Of good size of the thick smooth sort, with the best of logs, feet and ankles.

FRED S. BLACK,
Amherst N. S.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone, Sussex, N. B.

Homestead Farm

Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

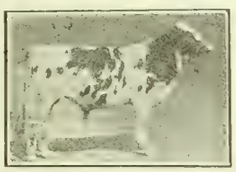
LOGAN BROTHERS, - - Amherst Point, N. S

BELLEVUE STOCK FARM.

Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.



Wish - Ton - Wish Stock Farm.

HOLSTEIN CATTLE,

We are offering two young bulls from six weeks to two months, and one fit for service by late summer or early fall.

HARDING BROS., rops.,
Welsford, Queens Co., N. B.

Kinnear Poultry Company, Limited.

New and second hand Model Incubators and Brooders for sale, also one Humphrey Green Bone Cutter.

Eggs from our specially selected pens B. P. Rocks and R. I. Reds, $1.50 per 15 eggs. Eggs from our utility pens of specially selected egg and market type B. P. Rocks and R. I. Reds, Rocks, $3.50 per 100; Reds, $4.00 per 100. Pekin Duck Eggs, 7c each.

Sussex, - - New Brunswick

SHORTHORN BULLS FOR SALE.

I have, for immediate sale, eight very nice Durham Bulls, from two to fifteen months old. They were sired by a bull imported from Hon. John Dryden & Sons and are out of excellent cows. Write us your needs. We can supply them and will give you good satisfaction

C. C. H. EATON, - Canard, Kings Co., N. S.

"Brooklands'" Holsteins for Sale!

We are now offering one Holstein Heifer, 6 months old, and one Holstein Bull, 6 months old, for sale. These Calves are "not akin." $80.00 will take the pair. For full information write

C. H. GILES, - "Brooklands," - Fredericton, N. B.
'Phone 2100. - - - P. O. Box 119.

——WE ARE OFFERING——

EXTREMELY LOW PRICES

——ON SEVERAL——

PURE BRED AYRSHIRES

——INCLUDING——

Some Aged Cows

2 Year Old Heifers, coming 3 in August, (in calf, due Aug. and Sept.)
2 Yearling Heifers. 2 Fall Heifers. 2 Fall Bull Calves.

Send for descriptive list.

Hampton Stock Farm Co., Hampton, N. B.

BARRED PLYMOUTH ROCK EGGS

Our Breeding Pens are in the best shape possible. Flocks are in 18 and 20 to a pen, with 2 male birds, alternateiy. Fertility guaranteed. We breed for utility only and stock shows the result in the egg basket. $1.00 for 13. Incubator Eggs, $5.00 per 100.

ALLANDALE FARM, - Hampton, N. B.

COVEN HAVEN STOCK FARM

St. Andrews, N. B.

The hadsome Clydesdale Stallion Sir, Hugh MacAdam (9408) rising 3 years. Choice young stock in both sexes of those wonderful utility dairy breeds; the Dutch Belted and French Canadian Cattle. In Tamworth swine we have several excellent young sows for sale. Prices most reasonable. Write or visit us.

J. R. OASTLER, Supt.

Some Observations on the Production of Sanitary Milk in the Maritime Provinces.

It has been written that over the entrance to every place where dairy operations are conducted should be inscribed the injunction "Be ye clean who enter here." Research and experience, year by year, showing the justice of the gospel of clean milk and the urgency for the adoption of the precepts of this gospel. When posterity looks back on our work so far they will see a people of mingled sincerity regarding this question of sanitary milk. What of our present opportunities, of our present obligations!

It has been said that the average man is a dirty man; and granting this to be true it only goes to prove the need for advancement all along the line. When the condition is such that no one can cast the first stone because he is not "without sin," we are in a unique position to take stock of where we are at. From this point by mutual effort we can then advance to a plane where we will be a clean, healthful and more progressive people.

We must adopt a consistent and persistent educational propaganda for scattering the gospel of clean milk throughout the heathendom of dairy practice. At the present time there is bearing on sanitary milk a large amount of published matter, and much of it is available to the public in bulletin form. More exhaustive treatises can be obtained at very reasonable prices. In frequent reviews of this matter the press can fulfil a noble mission. Municipalities can issue such information as will be of practical and educative value to sources from which their milk is obtained. Municipal authority to inspect these sources is one of the more prompt and effective methods of procedure. This is as it should be for undoubtedly the responsibility for the quality of the milk retailed in any municipality belongs to the officials of that municipality. With reference to inspection, to which we must submit and should welcome, it is to be noted that the best work is accomplished by making the introduction of the inspection a matter of education rather than an arbitrary enforcement of even the simplest of book rules.

Interesting and instructive information is supplied by the report of the Milk Commission appointed by the Ontario Government in 1909 to enquire into the production, care and distribution of milk. Nothing talks like a real investigation. Our percentage of deficiencies will be at least equally high. About 10 per cent. of the dairy farms visited by the Commission were found to be wholly unfit to be in the business of producing human food. Conditions in London and Copenhagen were studied by Mr. C. C. James, Deputy Minister of Agriculture. Mr. James reports that he believes the city of Copenhagen has the best general milk supply of any city in the world and he found the retail price of this milk 5 to 5½ cents per quart. When conditions for profitable milk production are not so favorable in Denmark as they are in the Maritime Provinces, then where is the responsibility for our quality of milk being sold at a price much above this and still the cry, "no money in dairying?"

City sanitary regulations are given under which milk may be delivered to and sold in the city of Copenhagen. Following these is a simple statement of the operations of the Trifolium Dairy Company. This company delivers 25,000 bottles of milk per day in the city of Copehagen and to show the fair manner in which the patrons are treated I copy one section of the regulations. "In the event of cattle becoming diseased between two visits of the veterinary, milk sellers covenant immediately to separate animals, especially if tuberculosis, inflammation of ducts, milk fever or acute diarrhoea occur, and in such case retain the milk from such cows and to inform veterinary. Any milk so retained will in such case be paid for until the veterinary's opinion has been given." A similar idea is presented in Mr. James' report on the Aylesbury Dairy Company, of London, England. "In 1908, scarlet fever broke out in the home of a producer. His milk was at once ordered to be with held until the Medical Health Officer reported a clean bill of health. This one case cost the company £161 6s. 7d. of which £148 10s. 8d. was the value of the milk not delivered to the Company.

Our practice differs so much from the foregoing regulations that ample excuse is found for mentioning them.

Of course we must admit that the question of sanitary milk is tied up in an already too high a cost of production. Until our farming methods produce a greater yield of more suitable feed for milk production; until the non productive cow is a thing of the past; until the cow which is capable of giving a large amount of milk is fed intelligently the business will always have a mill stone about its neck.

There are a number of points, however, the attention to which will always make the best out of even unfavorable conditions. It is surprising what can be done in this respect. Let us take a look at a number of them.

1.—Water and food supply. It is unreasonable to ask a cow to act as a filter to remove impurities from her drinking water. Cows should not be obliged to drink water from barn wells that are contaminated with seepage from the stable. Let us remember that out of eight pails of milk given by the cow seven are water. Tainted feed must be avoided for the same reason.

2.—The stable and stable air. There are stables that are dark and filthy. In these stables the air is laden with foul gases. If there is such motion in the stable at milking time as will cause dust particles to float in the air the conditions are made very much worse. These dust particles teem with bacterial ,ife of the foulest kind. Imagine milk coming clean from the cow and passing through an air like this.

3.—The cow. It is apparent that the cow must be healthy and clean. Nothing short of a miracle would get clean milk from some cows and through some stable conditions.

4.—The person doing the milking. How important he is! To think that two men can take the same pails, go to the same barn and milk the same cows under the same conditions and that for every 13 bacteria one man brings back in the milk the other man brings back 63. The aim should be to have the milking done by those whose sense of cleanliness is high.

5.—Milk vessels and strainers. Too much of the tinware sold is unsuitable for milk vessels. Pail tops are too wide and the tinning and soldering poor. A good place to get an idea of the tinware in use is to visit a repair tin shop. The visitor will often see milk vessels with a hard deposit on the inner surface. Imperfect washing and the use of hot water before the vessel has been cleaned produce this condition. The cleaning process is made much more difficult. And then the average tinsmith repairs these vessels as an accommodation and not as a business. Rarely

Make Every Cow Pay Her Board.

Do you know what your cows are doing? Do you know which ones are profitable—which ones are eating their heads off? It will pay you to get rid of the robber cows.

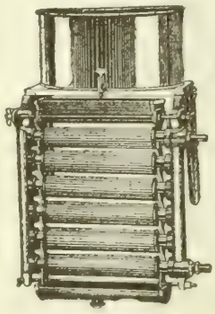
The Automatic Milk Scale and The Facile Jr. Babcock Tester

will show you in a short time which cows in your herd are paying a profit

The Automatic Scale is made especially for weighing milk in the pail. There is a loose indicator on the dial that can be set at o by a thumb screw when the pail is on the hook. Then when the pail of milk is placed on the hook, this indicator gives the exact net weight of the milk. It has another indicator that records the same as any spring balance, so it can be used for weighing anything up to 30 pounds—larger sizes weigh up to 120 pounds.

The Facile Jr. Babcock Tester is designed especially for use in the dairy and on the farm. It is extremely simple in construction and operation. The working parts consist of but two cut gears and they are enclosed in a cast iron case to keep them free from dirt and to prevent their catching clothing, towels, etc It turns easily, without vibration or jar. It is sent complete with glassware, bottle, brush and acid and full directions for use. It will pay you to have this scale and tester, whether you milk three cows or thirty cows.

Price $5.00 **Price $4.50**



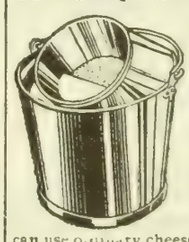
THE SECRET OF PURE SWEET MILK.

You dairy farmers can't afford to ship impure, germ-laden milk into the towns and cities. Our medical authorities are urging the Government to penalize offending dairymen very severely—don't you run any risks. If you pass all your milk through the Root Cooler-Aerator immediately it **leaves** the cow, you can guarantee it pure and sweet and get a bigger price for it per gallon. The

Root Sanitary Milk Cooler-Aerator

will keep the milk sweet for 48 hours because it kills the animal heat quickly and cools the milk to the same temperature as cold running water. The water is admitted at the bottom, flows through the bottom tube, then from the water column into the second tube and so on until it reaches the top tube. Thus the cylinders are kept perfectly cold all the time, and as they are deeply corrugated the milk flows down them slowly, reaching the retaining pan thoroughly cooled and areated. Cylinders are made of heavy copper, galvanized outside and guaranteed to stand heavy water pressure. Perfectly simple to operate—no complicated parts—a child can easily clean the whole machine in 5 minutes. Made in various sizes—will cool from 40 to 75 gallons an hour. Write us to-day for catalogue and prices —every dairyman should have a Root Cooler. It's a big money maker.

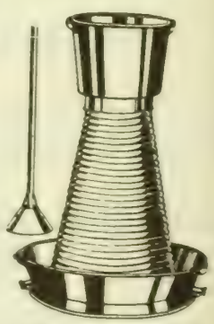
INCREASE YOUR DAIRY PROFITS



Strain your milk as it **leaves** the cow, not afterwards, and see that you strain milk **only**, not milk, dirt and bacteria. You can make pure milk and absolute certainty by using the

Sterilac Sanitary Milk Pail

Note its clever construction. The funnel is detachable. As the milk falls on the slant towards the milker, it passes direct to the strainer into the pail. All dirt falling into the opening is caught on a shelf or screen inside the funnel—not on the strainer—thus milk and dirt never come in contact. You can use ordinary cheese cloth for straining. Capacity 14 quarts, no joints on the inside; it is easily cleaned. **Price, $2.50.** Used by all up-to-date farmers and dairymen.



Purity Milk Cooler-Aerator

Cools milk rapidly, within 2 degrees of running ice water, well or spring water, wichever you use. Rapid cooling and thorough aeration insures milk keeping sweet for 48 hours and destroys odors The milk flows through the perforated pail on top on to the corrugated body, which ensures the milk running down slowly so that it is perfectly cool when it reaches the retainer pan. There are outlets at each side of this pan. This cooler is well made, has soldered seams, is easy to clean and simple to operate. Will last for years. **Price, $6.50.** Guaranteed as represented.

Write for Free Catalogue To-Day.

W. A. DRUMMOND & CO., King Street, East. Toronto.

METALLIC CEILINGS

Both clean and fire-proof—no dust and dirt falling, as from plaster ceilings. Costs no more, but looks thrice as artistic. The life of a plastered or papered ceiling is short and nearly every year needs repairs. Our ***Metallic*** Ceiling will last as long as the house—always fresh and clean. We can send you hundreds of pretty designs to select from for both ***ceilings*** and ***walls.***

Our beautiful free booklet tells you all about Metallic Ceilings and Walls. Send for one.
Phone Park. 800.

"Really I don't know how people can stand the constant drudgery necessary to keep the ordinary ceilings and walls clean. Metallic is so clean and sanitary."—The Philosopher of Metal Town.

MANUFACTURERS 1749

The Metallic Roofing Co. Limited
TORONTO & WINNIPEG

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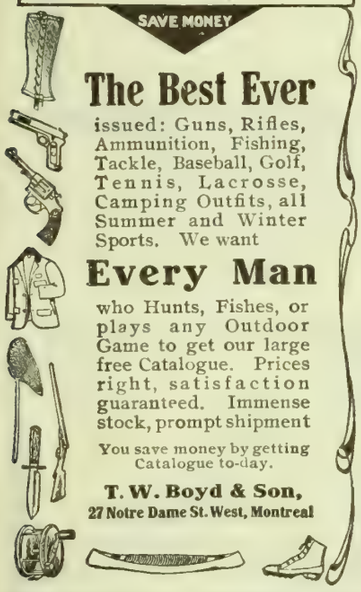

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Every Man

who Hunts, Fishes, or plays any Outdoor Game to get our large free Catalogue. Prices right, satisfaction guaranteed. Immense stock, prompt shipment

You save money by getting Catalogue to-day.

T. W. Boyd & Son,
27 Notre Dame St. West, Montreal

is the soldering flowed smoothly or in sufficient amount. See the tinsmith mending an open seam. He places his hot iron on it and is rewarded by an indescribable odor rising from the polluted crevice. With disgust, and often profanity, he indifferently stops the leak and passes the incomplete work. It is practically impossible to thoroughly clean much of this tinware with facilities such as prevail on the average farm. The vessel goes back to continue its neferious work. To milk clean milk into this vessel is to at once seed this milk with the elements of a flying start to perdition. As humanity is ordinarily constituted everybody wishes he had the other person's job, but in this case the tinsmith is not so much of a pessimist.

The best dairymen are conducting their work with the object of keeping dirt out of the milk rather than trying to strain it out after it has gained an entrance. An unclean strainer does more harm than good.

6.—The cooling of the milk. Milk should be at once removed to a place where the air is pure and then thoroughly cooled. Some day we are going to use a great deal more milk and milk products than we are using at the present time. Nothing is better or more economical. The luxury of this use will be available to the poor and the rich can enjoy nothing better.

W. N. ROBINSON.

The subject of this sketch, Mr. W. N. Robinson, has been on the staff of this paper for the past two years and through his energy, persistence, pluck, and enterprise has proven himself to be the best solicitor that has ever been in the employ of this company and possibly the ablest farm paper solicitor that has ever entered a farm home in Canada. When Mr. Robinson joined our staff we had in the vicinity of 3,500 subscribers, he is leaving us with about 8,000,—practically all the result of his labors. We regret that he is severing his connection but we can but wish him success in his new sphere.

He was made several very flattering offers when on a trip West in our interests. One of these he practically accepted, thinking that the Maritime Provinces could not hold out as good or a better proposition. But as soon as it was known that he had decided to sever his connection with us offers seemed to come to him from all quarters in the Maritime Provinces, but the situation which appealed most to him was the one offered by the Sussex Manufacturing Company, Limited, in the capacity of travelling salesman for that concern. He has already entered upon his new duties.

Mr. Robinson is a graduate of the S. Kerr & Son, business college and came to us fresh from that school.

We feel sure that all readers who have met Mr. Robinson—and this includes a large percentage—will be glad to know his earnest efforts are being appreciated and will join with us in wishing him every success.

The J. B. Armstrong Mfg. Co., whose advertisement appears on another page in this issue, have been very successful during the past few years through the enterprising efforts of their representative, Mr. H. A. Amos, is establishing their trade in nearly every place of importance in the Maritime Provinces.

At Oxford, N. S., a complete assortment of their very extensive line of carriages is carried, available for quick shipment to all parts of the Provinces named. In line with their successful policy, new styles have been added this year and a careful study has been made of the trade requirements in these Provinces.

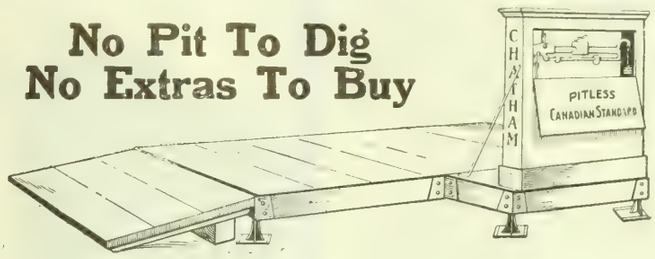
Any enterprising agent who does not handle the Armstrong Line should communicate with their Oxford, N. S. address, where Mr. Amos looks after their business, a catalogue or quotation will be promptly supplied to all enquirers.

This 5-Ton Scale Is Easy To Buy—

You need not club with your neighbors to equip your farm with the scale you need—the CHATHAM Pitless Scale. You can afford to buy it yourself. It will save you more than its cost in one season. Up to five tons it will weigh accurately all you buy or sell. You can erect it ready to use in a morning.

Comes Ready For Use **You Have No Bother**

No Pit To Dig
No Extras To Buy



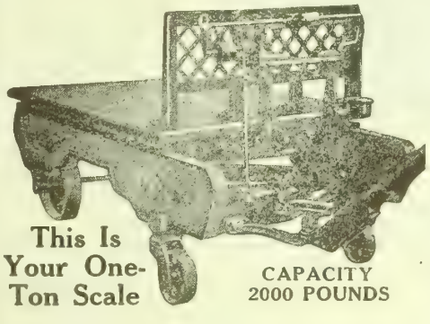
Your CHATHAM Pitless Scale will be YOUR Scale that you can take with you when you move. You can always get for it what you paid for it. And you need no skilled help to set up the CHATHAM—it comes to you complete, with plain directions. Built wholly of heavy steel. Nothing to rust, decay or go wrong. Government guarantees its absolute accuracy. Tested before it leaves the factory. Warranted fully.

This is the Complete Scale

Bear in mind that you have no hard work to do in setting up a CHATHAM. It is all solid steel, stands on its own feet above ground—no pit to dig, no fussy preparation needed before you use it. Comes to you so you can be weighing on it in a few hours after you get it. No skilled mechanic necessary at all.

Special Compound Beam — No Extra Cost

This season we include our new Compound Beam with each CHATHAM Pitless Scale without adding a cent to the price of it. You can find no bigger bargain; yet the price is 'way down low. In sections where we have agents we offer special long-time credit terms to those who would rather try the Scale before they pay for it. Write us and ask for full details.



This Is Your One-Ton Scale CAPACITY 2000 POUNDS

Handy to move about as a wheelbarrow, yet accurately weighs up to a full 2,000 pounds. Swivelled pole and front wheels let you turn it short through doorways and around corners. Strong and staunch, too, like all scales we build.

You'll Never Wear It Out

Main frame is one solid and very heavy casting. Levers are special heavy and strong, so they won't spring under excessive strains Bearings align themselves, because pivot rests on bearing loop — tilt the scale and it will still weigh right. And the price is very small!

I personally vouch for every statement this advertisement makes, and I further guarantee that my Chatham Pitless Scale is the biggest scale value you can buy for money in this or any other country. Write me about it and I will see that this is proved to your complete satisfaction. Write now.

MANSON CAMPBELL
President

7

WRITE US AND ASK FOR DETAILS

MANSON CAMPBELL CO. LTD.
CHATHAM - - ONTARIO

Making Cellar Water Proof

J. X. L., P. E. I.—Will you let me know through the columns of your paper if I can keep water out of a cellar that has a small spring rising in it. It has a wall all around it and I want to put in a cement floor. Spring only raises in very wet weather. It is our root cellar, and there is about 2 feet of water in it now. What thickness of cement will be required and what rate of mixture should be used?

Drain or pump out all the water and endeavor to plug the spring or if possible put in a drain that will carry off the surplus water, then lay down a coat of Concrete about 4 inches thick made of a proportion of 1 part cement to 4 parts aggregate. This aggregate should contain sufficient sand to fill all the voids and thus make a dense mixture. The Concrete should be put down very wet and tramped in place, then put on a coating of about ½ inch thick made 1 part cement to 2 parts fine sharp sand, thoroughly tamp this down into the other leaving the top only tamped not endeavoring to level it for a finish. Next apply a float 1 part cement to 3 parts clean sharp sand about 3 inches thick,this should also be applied very wet and tamped down and straight edged, then after the water is settled from the surface float and finish.

If this work is properly done it will keep the water out of the cellar.

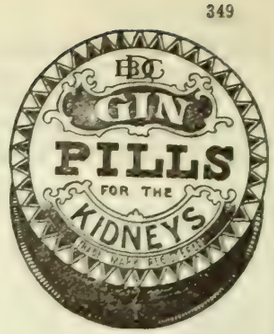
H. P.

The Clydesdale Stallion Colt, "June Day," offered for sale by Fred S. Black, Amherst, N. S., in his ad. on another page of this issue won second place in strong competition at the Maritime Horse Show, recently held in Amherst.

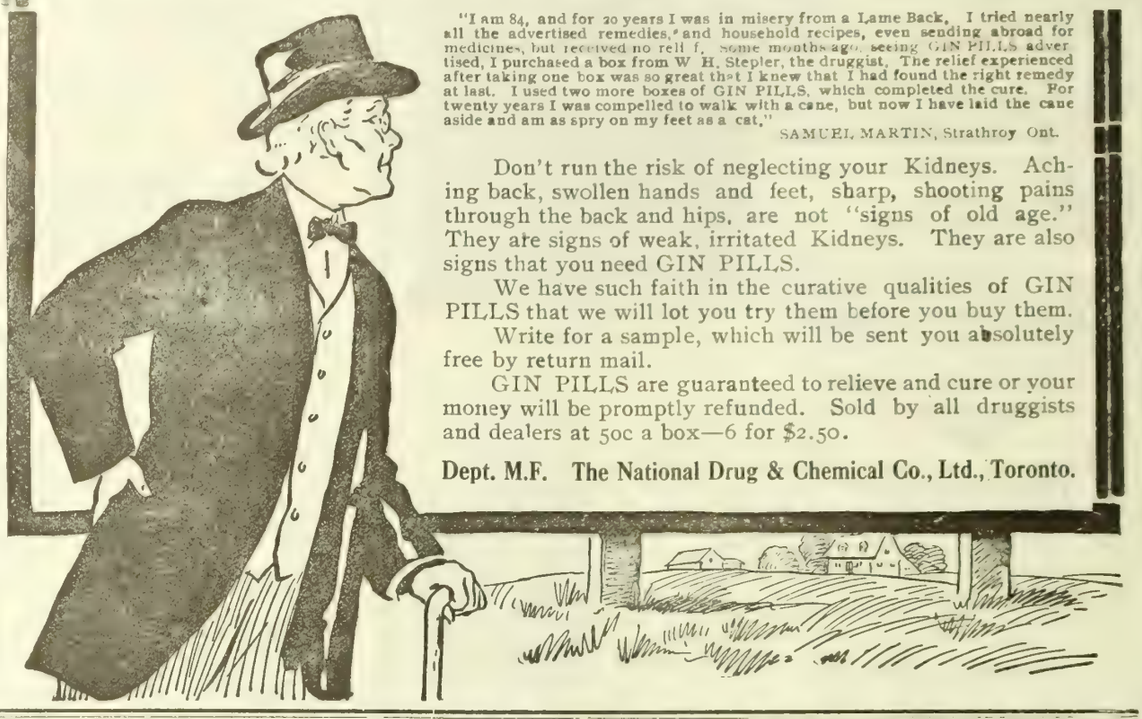
Help for weak aching backs

Few people reach old age entirely free of Kidney Trouble. That is why so many men and women of 50 and 60 suffer tortures with lame back, aching hands, arms and legs, Rheumatism, irritated bladder and frequent passages at night.

GIN PILLS mean a healthy, hearty old age. GIN PILLS keep the kidneys well and strong. GIN PILLS neutralize Uric Acid, which causes the pain, and soothe and heal the irritated kidneys.



Here is What Gin Pills Did for One Man 84 Years Old.



"I am 84, and for 20 years I was in misery from a Lame Back. I tried nearly all the advertised remedies, and household recipes, even sending abroad for medicines, but received no relief. Some months ago, seeing GIN PILLS advertised, I purchased a box from W. H. Stepler, the druggist. The relief experienced after taking one box was so great that I knew that I had found the right remedy at last. I used two more boxes of GIN PILLS, which completed the cure. For twenty years I was compelled to walk with a cane, but now I have laid the cane aside and am as spry on my feet as a cat."

SAMUEL MARTIN, Strathroy Ont.

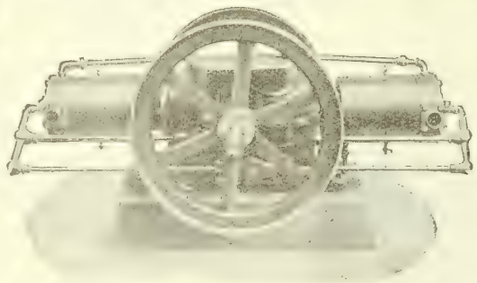
Don't run the risk of neglecting your Kidneys. Aching back, swollen hands and feet, sharp, shooting pains through the back and hips, are not "signs of old age." They are signs of weak, irritated Kidneys. They are also signs that you need GIN PILLS.

We have such faith in the curative qualities of GIN PILLS that we will let you try them before you buy them.

Write for a sample, which will be sent you absolutely free by return mail.

GIN PILLS are guaranteed to relieve and cure or your money will be promptly refunded. Sold by all druggists and dealers at 50c a box—6 for $2.50.

Dept. M.F. The National Drug & Chemical Co., Ltd., Toronto.



Made in 10, 16, 25 and 40 H. P.

Two Cylinder Opposed Gas and Gasoline Engines

The Two Cylinder Opposed heavy, duty engine is made to meet the demand for a successful engine for portable, traction and electrical work from 10 to 40 H. P.

This work requires the very best in every way possible to obtain in design, material and workmanship. A cheap single cylinder or light weight two cylinder engine will not answer as this work requires a strong and powerful engine with the minimum weight.

The Two Cylinder Opposed is the most satisfactory type on account of its lack of vibration, high efficiency, close regulation, economical fuel consumption, reliability and convenience.

For stationery and ordinary power purposes, they have no equal.

They make the most perfect electric light and do not require the extra heavy fly wheels or a fly wheel on the generator to produce a pleasing light.

They are the most economical and satisfactory engine made.

The London Gas and Gasoline Engines are Made in Canada

and are easy to start, easy to operate, easy to understand, right in principle, right in design, right in material, right in workmanship. Have few working parts, large bearings, well balanced and smooth running. No waste of fuel or battery, no wear on pump between impulses, enclosed crank case, mechanism running in oil, gasoline carried in base of engine, all parts strong, simple and accessible. A perfect reliable oiling system. No tank, no fan, no freezing, no packed joints. No difficult adjustment to make, jump spark ignition and four cycle.

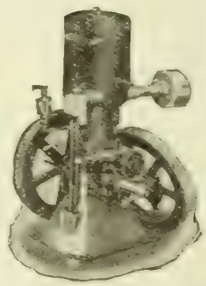
Small Gasoline engines are fast becoming a household necessity and to supply this demand we produce the **"LONDON"** designed and constructed to avoid the many annoyances so common to small engines.

In the manufacture of these engines we have used our best efforts to embody the smallest number of working parts possible maintaining all essential features necessary to make it a first-class reliable engine, easily operated by boy or girl.

Every **"LONDON"** engine is thoroughly tested and regulated before leaving our factory and so far as adjustment is concerned, is ready to be put in operation as soon as the gasoline is furnished for the fuel tank, battery connections are made and the water jacket filled.

Any make of gasoline engine will run something—somewhere—somehow; the **"LONDON"** will run anything—anywhere—all right up to its rated capacity. It is always ready for all purposes, at all places, in all kinds of weather, all the time. Wind or no wind, winter or summer, you can always pump water if you have one of our pumping outfits.

It is especially designed to meet a growing demand for a light, reliable power for pumping water, running cream separators, sprayers, all kinds of water systems, saws, cement mixtures, printing presses, feed grinders, and all light farm machinery.



Write for Descriptive Catalogues.

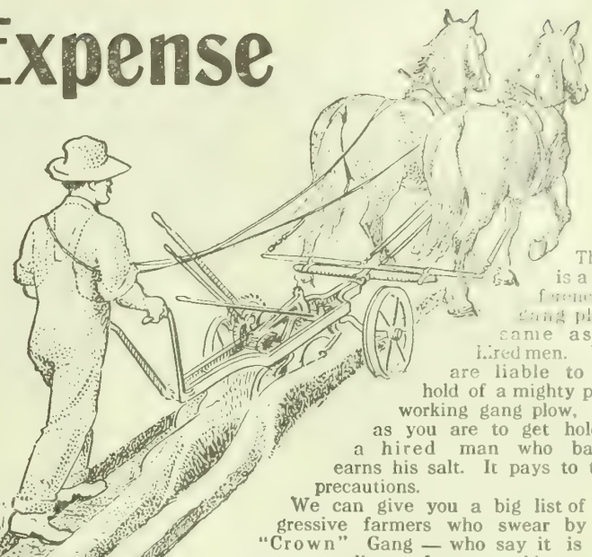
The Scott Machine Co., Ltd., 290-296 York St., London, Ont.

1 1-2, 2, 2 1-2, and 4 1-2 H. P.

Look at This.

Saves Time, Labor and Expense

Frost and Wood Crown Gang Plow



We urge you to do your plowing this season with the "Crown" Gang Plow instead of using single-furrow walking plows—or riding plows. The "Crown" turns two furrows where the ordinary walking plough turns one. It turns the furrows faster, cleaner, more evenly, too. You walk twice as far, and take more than twice as long, to do the same amount of work with a single-furrow plow as you can do with the "Crown" Gang.

But why walk at all? Why not use a riding plow, you say? Simply because it isn't good business to do so. When you use a riding plow you hitch on one more horse than the single-furrow plow needs. The extra horse is not to do the work faster. It is needed to pull your extra weight around the field. Now, can you afford the expense of that extra horse merely to enjoy the luxury of riding? Why not use the extra horse on the "Crown" Gang and break twice as much ground?

Just do a little figuring for yourself and you'll prove that the "Crown" Gang will pay for itself in one season in the time, labor and expense it will save you. If you would like your figures verified, send for booklet which shows how the "Crown" Gang will save you $15 per week.

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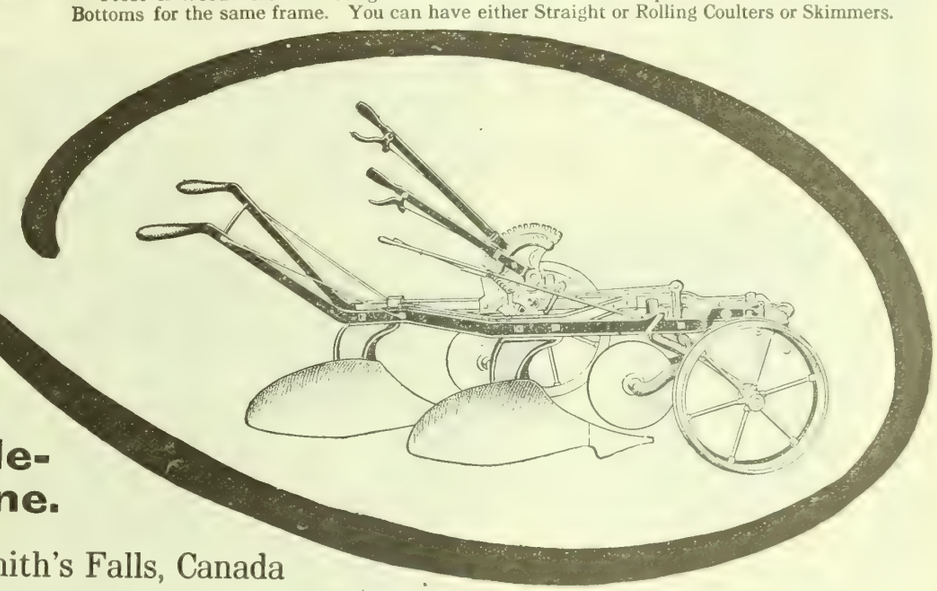
There is a difference in gang plows same as in hired men. You are liable to get hold of a mighty poor-working gang plow, just as you are to get hold of a hired man who barely earns his salt. It pays to take precautions.

We can give you a big list of progressive farmers who swear by the "Crown" Gang — who say it is the surest, steadiest, fastest-working plow they have ever seen or used. The "Crown" is not, like so many others, an old "failure" which has been rebuilt or remodelled. The "Crown" is a plow on which we spent a good long time, and no little cash, to perfect. It was not placed on the market until it had been tested many months under various soil conditions in different sections of the Dominion. We knew the "Crown" was a "success" before we made a single sale, and it has made a record we are proud of.

It's the perfect shape of the mouldboards that makes the "Crown" Gang turn the sod so easily and produce such clean-cut, beautifully even furrows. It's because they are made of soft-centre crucible steel and highly polished that they scour so quickly. The wheels are guaranteed dust-proof, too. And they have roller bearings—which lightens the work for the horses.

Once you set the plow you need not touch the easy-working, conveniently-located levers again. The "Crown" Gang will stay right down to its work and withstand the hard strains of plowing through heavy land. The "Crown" is so sturdily built that it will triumph where an ordinary plow will fail you. So just make up your mind you'll own a Frost & Wood "Crown" Gang Plow this season. You can purchase both sod and stubble Bottoms for the same frame. You can have either Straight or Rolling Coulters or Skimmers.



Turns Two Clean, Even Furrows in Same Time Single-Furrow Plow Cuts One.

Frost & Wood Company, Limited, Smith's Falls, Canada

For Sale by All Frost & Wood Agents

Distributing Warehouse: Truro, N. S.

THE Frost & Wood Company LIMITED.

Distributing Warehouse: Charlottetown, P. E.I.

Maritime Branch: St. John, N. B.

The Farmers Future Building Material.

RESIDENCE BUILT OF CONCRETE, COST COMPLETE $15,000.00.

A few years ago, I remember riding on a Grand Trunk train, and suddenly we noticed a red glare, and were swiftly gliding by a scene that is occurring too often,—a farm house on fire—the inmates frantically running back and forth, each time saving some household article, flames raging in the roof near the chimney, and so perhaps most of the lower floor belongings were saved, but the house was doomed to complete destruction, being built entirely of wood and no fire protection at hand.

Although the burnt child dreads the fire, not so the parent. If he burns out, and is fortunate enough to have carried some insurance, he will not heed the lesson, and perhaps the very next day is beginning to figure on re-building of the same inflammable material.

It is not only the individual, however, entire communities have been known to do the same fool thing.

In the United States, the loss by fire is almost beyond comprehension —including insurance premiums and preventive agencies, the loss in 1906 reached the enormous total of over $500,000,000.00, being over 80 per cent of the value of the total new building construction for that year. I could continue the statistics as to loss of life attendant upon the fire friends sway that would seem almost incredible.

Old Mother Earth, that ever contributes so abundantly to our sustenance, is equally ready, from her store-house of eternal riches, to provide in plentitude our best building materials. Sand and gravel are to be had in almost every locality, and when you consider that this material makes up more than three-fourths of the necessary ingredients to produce an indestructible building material, it makes one feel that a wise Providence is indeed shaping the destiny of mankind to a better understanding of life's requirements.

Of all the building materials called to the attention of mankind, none have so completely won favor as the Concrete Building Block. It is the most wonderful building unit ever evolved by man, and its destiny is like its own composition,—everlasting. Its use has spread with a rapidity that can be likened to a sweeping prairie fire, fanned by the tornado's breath, and construction with blocks has found devotees and favor in the furthermost corners of this earth.

Within the past fortnight, America's foremost citizen, ex-President Roosevelt, at Khartum, in the Sudan, 600 miles up the White Nile, at the very outpost of Western civilization, spoke within the walls of a concrete block building, a Mission church, built by the American Mission Society.

The adoption of the Concrete Block in that region must be credited to a Reverend Mr. Sowash. He purchased a Block Machine in the United States of the Face-Down variety, which machine has not only a national, but an international reputation. The simplicity of the machine is such that even the natives were quickly able to use it and make blocks. Mr. Sowash began building and the natives gazed with open-eyed wonder while the engineers in charge of the Government Public Works Department, shook their heads in doubtful suspense for the season of wind-storms, which would blow down these 8 inch wide walls, but the storms raged during the unfinished period of construction, and the defiant walls shook off their adversary. After completion and use, another period of storms arrived, and again the native population and foreign element came forth to see a catastrophe, but again it stood the strain, as would have the Rock of Gibralter.

Then were even the Government Officials convinced, and borrowed this Mission machine for experimentation. Soon there came to the American manufacturer a carload order. This was followed by a duplicate order, until the Sudan Government has now established eight Concrete Block making plants, and has advised their intention of starting four more, carrying on all Government work with blocks as the prime building material.

In far off India, Australia, Japan, China, Korea, Siberia, Africa, Europe and South America, are Concrete Block Machines at work. One American firm, with a branch factory at London, Canada, has sent its machines to all the countries mentioned, and has over 8,000 in use in the United States alone.

The American farmer is adding it to his equipment as he does the necessary agricultural implements. His twelve-year-old boy can make blocks and considers it play and recreation. The farm hand, during a rainy spell, or when not otherwise employed, can make them. The winter period of inactivity on the farm may be used to prolific advantage.

A barrel of cement, properly mixed with sand and gravel, will produce fifty blocks. Instructions for mixing, proportions of sand, gravel and cement to be used, amount of water and consistency of material, are furnished in simplicity of language easily understood by the average school boy.

Given the proper machine, that embodies simplicity, mechanical perfection and durability, and the most inexperienced, with instructions for operating, will turn out a block every

RESIDENCE BUILT OF CONCRETE. 18 FT. HIGH, 8 FT. DEEP, AND 34X35 FT. TOTAL COST $3,800

two minutes. Carefully handled in its green state, when taken from the machine to a place undisturbed, it will take on its initial set of crystalization or hardening process within the first six or eight hours, and at the end of 24 to 36 hours, depending on weather conditions, can be safely removed for storage into the oven.

Its curing process is to simply souze it with water say twice a day, morning and evening, for a week, especially in very hot, sunshiny weather. If the farmer has enough storage room under roof, a somewhat better curing result is generally obtained. The block should never be subjected to hot winds or sunshine until at least 36 hours after being made, nor should a block be used until it is from 14 to 21 days old.

With these easily adopted rules adhered to, the farmer has obtained a building unit 8 in. high, 8 in. wide and 16 in. long, which, struck with an instrument, will ring like flint, that becomes harder with age and will not disintegrate, that is fireproof, frost-proof, vermin-proof, sanitary, dry, eliminates all expense of repairs, requires no paint and properly laid with the use of good mortar will prove a cool abode in summer and a warm one in winter.

Such construction means a saving of fuel, greater comfort, a saving in the amount of insurance carried and peace of mind through security that cannot be bought by dollars. It can be given the most artistic cut stone facing effect without a cent of additional cost. Each block displaces the equal of twelvebricks, and an 8 in. block wall has greater strength than a 12 in. wall of brick.

It can be and is being used for every possible kind of construction. On the farm, it is practical for building houses, barns, silos, bins, foundations, etc., etc. In the cities, there is no kind of construction that it is not applicable to. Railroads are making their blocks for depots and switch towers.

One of its striking features is the fact that not only can the inexperienced soon learn to manipulate the machine and produce the product, but on account of the size of the block as a unit, it is easily laid in the wall by men totally unfamiliar with masonry. It is even possible now to buy mortar gauges to lay on the blocks by which the mortar reaches the correct section and by the gauges is spread to proper thickness and proportion.

No wonder that the brick trusts are fighting for their very future; no wonder they recently voted to spend a great sum of money in advertising; no wonder they started a campaign of vilification and untruth against the Concrete Block. But the handwriting is on the wall. Nothing can erase it. It has virtue and virtue will ever live. It has Time's finger pointing to its use and existence, unshaken by its ravages for twenty centuries.

Time will be when every building law will be framed for its compulsory use. The awakening has come. Security and self-preservation demand its use. Conservation of our forests demand it. The hand of Providence can be seen, saving us from the destruction that is sure to follow by flood the denudation of our glorious woodlands.

The trend of the cement age can best be gauged by the spontaneous outpouring of interested people at the recent Cement Shows held in Chicago, Ill., and London, Ontario, where many thousands of people sought information.

In twenty years, the production of cement in the United States has increased from a few thousand barrels, until last year's output touched the 50,000,000 barrel mark. In Canada the increase in the last five years was from 1,000,000 to 5,000,000 barrels.

" Mr. Farmer, if some steel shingles are as leaky as the guarantee behind them, they're not worth the cost of labor in laying them. Stick to 'The Eastlake.' "— The Philosopher of Metal Town.

You can build cheaper than ever before—you can make your farm buildings weather proof for all time with ——

"METALLIC"

Lumber is of inferior quality now-a-days. Why pay high prices for it when you can cover your buildings with "Metallic"? Galvanized sheet steel is the most desirable building material known, and "Metallic" is the heaviest and toughest made.

By actual test "Metallic" has proved itself the best material for roofing and siding. Roofs covered with "Eastlake" Metallic Shingles 25 years ago are in perfect condition to-day —absolutely lightning, wind, rain, snow and rust proof.

Look over this list, check the items that interest you, clip list and mail, with your name and address to us. We will give you valuable information that will save you money.

"EASTLAKE" METALLIC SHINGLES—for all buildings.
"METALLIC" ROCK FACED STONE OR BRICK SIDING—makes an artistic house.
"METALLIC" CEILINGS AND WALLS—most sanitary interior decoration.
"MANITOBA" STEEL SIDING—for grain elevators.
CORRUGATED IRON—for barns, implement sheds and stock buildings.
"Metallic" Granary Lining—easy to lay. Protects the grain from rats, mice and other vermin.

On receipt of your name we will mail you our interesting illustrated booklets, "Eastlake Metallic Shingles" and "Interior Decoration in Metal." Write to-day.

MANUFACTURERS

The Metallic Roofing Co Limited
TORONTO & WINNIPEG

8053

Ideal Concrete Blocks

THE FARMER'S SALVATION.

Built of Ideal Concrete Blocks, Size 30x32 ft., Cost $1,600.

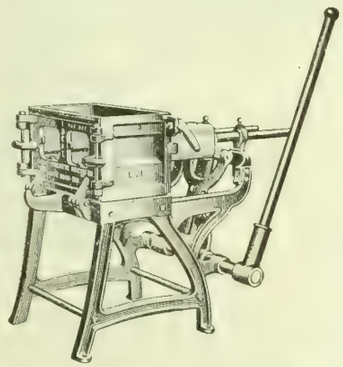
The **Ideal Concrete Block Machine** is as much a part of Farm Equipment in Canada as any Agricultural Implement.

Built of Ideal Concrete Blocks, Cost $2,500.

Its simplicity permits the inexperienced **farm hand** to make **Ideal Concrete Blocks,** which can be used in every kind of **Farm Construction.**

Sand and Gravel make up 3-4 of the material of which **Ideal Blocks** are made.

Write us for full information.



The Famous Ideal Concrete Block Machine.

The use of **Ideal Concrete Blocks** means **security** against **Fire.** No **repairs** or **painting.** A **vermin proof, indestructible material** that **hardens with age.**

We supply full information to every purchaser of our machinery.

Houses, Barns, Stables, Silos, Dairies, Poultry Houses, Foundations, Etc.

IDEAL CONCRETE MACHINERY CO., Ltd, - 221 King Street, - LONDON, ONT.

Build Concrete Silos

Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements.

London Concrete Machinery Co., Ltd, 19 Marmora Street.
London, - - - Ontario.
Largest Manufacturers of Concrete Machinery in Canada.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 809 Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

VETERANS.

We can always get you the very highest spot cash for your Dominion, South African or Ontario Land Warrants. Write us before selling,

MUI, HOLLAND & Co.,
34 Victoria St.
Toronto.

Impotency.

H. R. C., N. B.:—I have a cow that does not get with calf although she has been bred a number of times to good and different bulls. Can you tell me the cause of this and the remedy, if any?

This condition is recognized as impotency and may be caused by several conditions, such as excessive fattening which may cause a fatty degeneration of the overies, closure of the fallopian tubes, tubercular deposits in the ovaries, fallopian tubes or uterus, a hardening of the os uteri or opening between the vagina and uterus which may cause a closure of the opening, repeated immature breeding, a mild acidity of the fluids in the vagina or uterus that reduces motion and causes the death of the spermatozoa or male germ. Mildly alkaline surroundings increase the activity of the male germ and prolong its life. Treatment:—As the causes are many so must the treatment be, but in many cases, all treatments fail in the excessively fat animal. Reducing treatment is advisable, such as physic, consisting of from one to two pounds of Epsom Salts, according to the size and age of the animal, and two to four drams of Ginger dissolved in two quarts of warm water and given at one dose as a drench two or three days before coming into heat. Feed lightly for several days before and for twenty-four hours after administering the dose giving only a wheat bran mash at feeding times and watering often. Afterwards feed lightly and excerise daily. If on examination the os uteri is closed have it opened. A knowledge of the part is necessary for this so it is advisable to secure the services of a skilled operator. An injection of yeast cake solution into the vagina is frequently beneficial and may be administered as follows: Take a medium sized yeast cake, dissolve it in half a pint of warm water, not boiling, allow it to stand in a warm room for a few hours, add another half pint of warm water and inject it into the vagina, with a rubber bulb syringe, eight or ten hours before breeding. When degeneration or permanent closure of any of the organs exist treatment cannot be successful.

J. STANDISH, V. S.

Raising Young Ducks.

Mrs. W. R., York Co., N. B.:—"I would like to get some information on raising young ducks. Can anything be sprayed or rubbed on them to keep Black Flies off them? They are so numerous on or around them that they can hardly stand in one place long enough to eat and in three or four days they get so weak that they die. I think the flies suck all the blood out of their bodies."

In reply to the foregoing inquiry, the following experience from a practical breeder will be of interest to the enquirer:

My breeding Pekins have a limited range of grassy, sandy land and free access to a mill race after they have laid. They get their meat diet in the water. At all times the birds have access to drinking water. During the breeding season I keep one drake to six or eight ducks and thus secure good, hatchable eggs. As ducks are not reliable sitters, I use hens for hatching and rearing. It is necessary to nave large, clean coops with earth floors and to move them frequently to clean ground, because the ducklings are not only sloppy, but dirty. I often have calls for duck eggs early in April, but always discourage early setting. About the first of June is early enough to have the ducklings, then the cold, stormy period is passed, and the earth is getting warm.

Ducks need not only sunshine and warmth, but shade. A limited grassy range, not too large, if provided with a few bushes is admirable. If large, the little ones will run their legs off. For the first week I give bread and milk rather dry, then add unbolted corn meal about half and half. After a few weeks, they get wheat bran and once a day a little green cut bone fresh from the butcher's. Soon I feed some cracked corn and vary this feed with a good Johnnycake boiled potato and green feed, such as endive, lettuce or spinach. It pays to raise these crops for the ducks. I feed the ducks often, all they will eat clean, and as they are like cats for seeing at night, I give the last meal at nearly dark. Water they must have by them all the time, so I see to the drinking cups frequently. My drinking vessels are corn and salmon tins inverted in saucers.

I keep only a small flock of ducks to supply orders for breeding birds and eggs for setting. Only the surplus is disposed of for the table. There is a very large demand for breeding ducks and eggs, so that it pays to raise ducks for that purpose alone. For market purposes ducks can be raised well anywhere, even remote from water; but since all water fowls mate on the water, there will be complaint of infertile eggs if they do not have access to ponds or streams.

The essentials of duck raising are cleanliness, sunshine, shade and good food.

Another practical breeder says:—"I have never been troubled with black flies or any other vermin on ducks, but if they were sprayed with fly poison say, Dr. William's Fly Poison, I think it would prove satisfactory. I use it on cattle and it is the best thing I know of."

The above reply is from one of the oldest duck breeders in the country, and was submitted by Mr. A. G. Gilbert, of the Poultry Department of the fly poison in moderation, so that the ducks are not exterminated who says:—"I should advise the use as well as the flies.

Has any of our readers had any experience along this line?

Regular Habits

An Absolute Necessity For Good Health

You might as well expect to find a man or woman healthy with constipated bowels as to find a city healthy when its sewers are blocked with refuse.

Nature demands that the indigestible food and waste matter which collects in the lower bowels shall be got rid of at least once in twenty-four hours. If this is not done it decomposes, filling the bowels with poison, which is taken up into the blood and carried all through the body.

Naturally, this poison affects the work of every organ. *The liver is deranged, digestion is upset, and biliousness, headaches, lassitude and dizzy spells follow.*

Literally millions of people suffer these results of constipation without realizing the cause, or doing anything to remove it. Yet it can be removed, easily and with certainty, by using **Dr. Morse's Indian Root Pills.**

Take, for example, the case of Mr. George Andrews, Halifax, N.S., as he himself describes it:

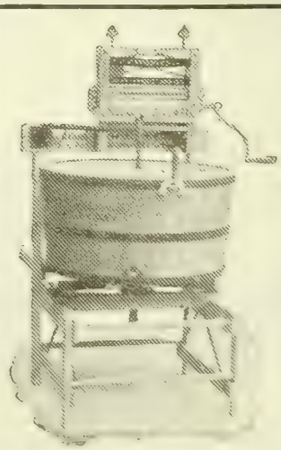
"For many years I have been troubled with chronic constipation. This ailment never comes single handed, and I have been a victim to the many illnesses that constipation brings in its train. Medicine after medicine I have taken in order to find relief, but one and all left me in the same hopeless condition. At last I read about these Indian Root Pills. That was indeed a lucky day for me, for I was so impressed by the statements contained therein that I determined to give them a fair trial. They have regulated my stomach and bowels. I am cured of constipation and claim they have no equal as a medicine."

Dr. Morse's Indian Root Pills were first taken to cure constipation nearly a hundred years ago, and during the last half century they have been very extensively and very successfully used throughout the world. *They are entirely vegetable in composition and do not sicken, weaken or gripe like mineral purgatives.*

DR·MORSE'S INDIAN ROOT PILLS

For Constipation

For Sale Everywhere at 25c. per Box. 21



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The machine which is warranted to give satisfaction. Runs on Ball Bearings. Easiest worked and most satisfactory machine on the market.

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Raise The Crop That Never Fails

That crop is poultry—the crop that knows no "bad years." You can raise that crop on your farm, no matter whereabouts in Canada it is. You can raise poultry successfully, make money doing it, and be sure of a good market for all you do raise. You need make no heavy investment to start at it; you need no elaborate equipment; you don't have to give up a big slice of your land to poultry-raising, even if you go into it on a pretty big scale.

Nor is it hard work to make a go of poultry-farming,—not anything like the work it takes most everywhere to make even a pittance out of ordinary farming. Poultry-raising, nowadays, with The Peerless Way to follow and the certainty it provides for you, is actually a business that you owe it to yourself to get into, and to get into right away. Consider the matter carefully. Read every word of what follows, and act upon its suggestions.

This Is How You Can Make Your Farm Pay Better

First of all, sit down now and drop us a post card with your name and address on it. That will bring you a book you ought to read twice, at least,—it is packed so full of facts about poultry-for-profit. It tells you the real truth about poultry-raising; there is no empty theory, no clever writing, in it at all; but it certainly does clear up a lot of problems that use to puzzle people. This book explains just why The Peerless Incubator, The Peerless Brooder, and The Peerless Way make a combination that puts success within anybody's reach—makes success practically certain, failure practically impossible.

The Peerless Incubator is so designed, so constructed, from practical experience, with precise knowledge of the climatic conditions of every section of Canada, that it will positively hatch perfectly in any part of the country. When you get that book we ask you to send for, you will read letters in it from every province of the Dominion,—letters from people who have done with the Peerless what they could not have done with any other incubator built. That may sound like a bold statement; but you will learn its truth once you study the subject. Get the book and see why.

Very Little Money Will Start You Right

Don't imagine for a moment that you need a great deal of cash to start after the profit there is in poultry. One important feature of The Peerless Way is how easy it is made for our friends to go into the business with but very little ready money. And don't imagine, either, you need be anything of an expert to succeed with poultry. Your own good common-sense, added to a fair degree of diligence and effort, equips you thoroughly to make money poultry-raising, and to make it quick. Get the cold facts.

We Guarantee To Find a Buyer For Your Product

Here is another valuable service you get when you follow The Peerless Way:—We guarantee to find a buyer for all the fowl or eggs you want to sell—a buyer who pays spot cash, pays the highest market prices, and charges no commission whatever. Poultry prices, and prices for eggs—as you would know if you lived in a city—have been climbing steadily year after year. They are going to be higher still; they will never be lower, at least; because the demand is growing faster than the supply.

You Get, Free, The Advice And Aid of Experts

Another very important thing about The Peerless Way is that our interest in your success doesn't lapse when your Peerless Outfit is shipped. We figure, you see that our reputation is largely bound up with your success—yes, with **your individual success,** once you become a Peerless follower. If one Peerless customer should fail at poultry-raising because we did not do all we should have done to help him, we would feel disgraced. So we try to see to it that no Peerless user fails. Our Board of Experts gives advice, counsel, detailed instructions, to any Peerless user who wants them. And the advice is so plain, so explicit, that a child could not misunderstand it. It tells just how to overcome every difficulty poultry-raising has; and it explains fully the methods which have built up the largest poultry-farm in Canada—the great Poultry Yards of Canada, Limited, at Pembroke, where the Peerless method of hatching was perfected and is exclusively followed.

The Best Paying Business You Can Get Into

For the work involved and the money required, poultry-raising, The Peerless Way, is the best business there is. It has possibilities big enough to interest a capitalist; and yet a schoolboy of average intelligence can succeed at it, make money at it, prosper in it, yet start with but a few dollars. There is not a farm in Canada on which poultry cannot be raised for profit; there is not a farm on which poultry will not pay better than any other crop. You simply cannot find a better investment for part of your time or for all of it. Neither can you find a better way to go into it than The Peerless Way. Ten thousand people are doing well with it. So can you.

Let us ship you this and trust you for it. We pay the freight and give you a 10-year guarantee.

We Trust You Willingly

When it is not just convenient for our customers to start on a cash-down basis, we willingly arrange such long credit terms that the Peerless equipment pays for itself—earns its whole cost long before the last payment is due. You will find us very easy people to deal with; you will be pleased and satisfied at every point. Write us to-day.

FREE Big Valuable Poultry Book

You have read enough here to convince you, probably, that there really is something worth while in poultry raising The Peerless Way. Now send for the FREE book that tells the whole story—that clinches the whole argument—that gives facts and figures and proofs—things you want to know, and ought to learn of right NOW. Make a start this very day, Send for the book. Address:

We carry ample stocks in our big distributing Warehouses at Winnipeg, Regina, Calgary, Edmonton and Vancouver, for the convenience of our Western friends. Address all letters to Head Office at Pembroke, Ontario. They will receive prompt attention.

LEE Manufacturing Co., Ltd.
152 Pembroke Road
PEMBROKE ONTARIO CANADA

Institute Work in the Annapolis Valley.

Messrs W. H. Woodsworth and L. D. Robinson have been busy for the past six weeks addressing meetings in Kings, Digby and Annapolis Counties. The subjects spoken on have been: Better Fruit, Commercial Fertilizers, Dairying, Soil Cultivation, Rotation of Crops, etc.

Greater interest is manifested in agricultural education this season than ever before and the attendance has been larger than any previous year.

Farmers are realizing, more and more, the importance of systematic methods in their business.

Mr. D. Drummond, of Ottawa, and C. M. McRae have each spent a week in the Valley.

Theological Students Visit the Nova Scotia Agricultural College.

On Thursday, March 24th, the student body of the Presbyterian Theological College, Pine Hill, Halifax, twenty-four in number, accompanied by Principal McKinnon, Ex-Principal Pollock and Professors Stewart, Falconer and Kent, of the college faculty, were the guests of the Agricultural College, at Truro. The public, at least, of the Upper Provinces may better know Pine Hill College from the fact that one of its former principals was President Falconer, now of Toronto University, and one of its former Professors, Principal Gordon, now of Queens College, Kingston. The life of the church, as well as the whole community of the Maritime Provinces, is vitally associated with the condition of agriculture. Not only have the majority of the churches' leading ministers been reared in farm homes, but the really substantial and permanent part of the church constituency is to be found in the rural community. This visit of those who will soon occupy the pulpits of the country implies not alone a recognition of the importance of agriculture, but a desire on the part of the pulpit to effect a greater interest in the improvement of agriculture. No man moulds the sentiment of our rural communities to the same extent as the clergymen and this manifestation of interest in agricultural education cannot, therefore, but lead to a further development of a sentiment in favor of improved agriculture in the Maritime Provinces.

During their visit to the College, these Theologues personally inspected its various departments. They listened to a demonstration in the judging of cattle and horses. They saw personally the herd of College dairy cows that have produced during the past year over 10,000 pounds of milk each in contrast to 3,000 pounds, the produce of the average American cow; and they appreciated the demonstration that such cows as these would more than treble the agricultural wealth of the Maritime Provinces. They saw exhibited in the pavilion high class types of roadsters, carriage, saddle and heavy draft horses and they listened to a discussion as to the importance of these various classes of horses in the farming community. They inspected the poultry plant and learned of the possibilities of the modern hen and they even visited the recently constructed piggery at the College Farm, where they had to admit that, despite the old testament statement about "sows wallowing in the mire", college pigs, at least, when given an opportunity, were as cleanly as any other class of domestic animals. They listened to a lecture in Biology and examined specimens of plants and insects. They studied specimens of leguminous plants and saw the rootlets all covered with nodules and they saw under the microscope the bacteria that exist in these nodules and which make clovers and allied plants such enrichers of the soil. They listened to a talk on improved seed and another on the value and means of increasing the

2 Two Pairs of Hosiery FREE 2

You pay the same price for the hosiery you are now wearing as you would for Pen-Angle Guaranteed Hosiery. Yet it isn't nearly so serviceable as Pen-Angle. We are so positive of this that we **doubly** guarantee Pen-Angle Guaranteed Hosiery to **wear longer** than any other cotton or cashmere hosiery, we care not what make or brand.

This is Our Double Guarantee

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to WEAR LONGER than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs FREE of charge.

Buying hosiery on this plan you cannot lose a single cent. If Pen-Angle Guaranteed Hosiery fails to fulfill the guarantee in any particular we bind ourselves to give you back, free of charge, twice as many pairs as you pay for.

The largest hosiery mills in Canada stand back of this astonishingly liberal guarantee. It will be fulfilled to the last letter.

Remember, the wear is not the only thing we guarantee. The fit, the comfort, and the permanence of the dyes are also guaranteed. Could you ask for more?

Pen-Angle Hosiery is made by an **exclusive** patented p ocess. It is the **only** Seamless Hosiery, made in Canada, that has the **shape knitted** into it.

The ordinary way to make Fashioned Hosiery is to stretch it into shape while wet. Such hosiery loses its shape after one or two washings. 48

Ask your dealer to show you Pen-Angle Guaranteed Hosiery. Our guaranteed lines have a guarantee slip in each box. Pen-Angle trade-mark is on the hosiery, too.

If your dealer cannot supply you, state number, size and color of hosiery desired and enclose price, and we will fill your order direct.

FOR LADIES.

No. 1760. Black Cashmere hose. Medium weight. 2-ply leg. 5-ply foot, heel, toe and high splice, giving strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

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No. 1720. Cotton Hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black and colors. Box of 4 pairs, $1.00; 6 pairs, $1.50.

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No. 2404. Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black and colors. Box of 3 pairs, $1.50; 6 pairs, $3.00.

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No. 330. "Everlast" Cotton Socks. Medium weight. Made from 4-ply Egyptian cotton yarn, with 6-ply heels and toes. Black, light and dark tan. Box of 3 pairs, $1.00; 6 pairs, $2.00.

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WARRANTED HIGH PENMAN'S GRADE UNSHRINKABLE

Dr. Bell's Veterinary Medical Wonder cures inflammation of lungs, bowels and kidneys. The 20th century wonder Agents wanted in every county. Write for a free trial $1.00 bottle. This offer only good for 90 days. Limited to 500 bottles.

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WE WANT CREAM!

Farmers send your Cream to the Standard Creamery Co. Highest prices and satisfaction guaranteed. Returns made monthly. Cans, Tags and seals furnished free on application. Address :

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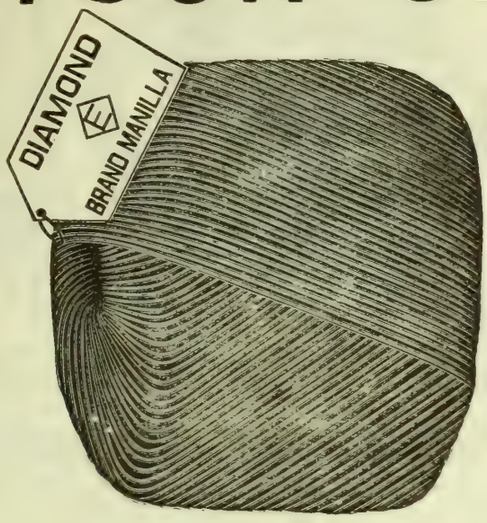


THIS CUT ILLUSTRATES A BALL OF DIAMOND Ⓔ MANILLA TWINE, THE KIND THAT WE OFFER YOU NOW AT SUCH A REMARKABLY LOW PRICE.

THE LOWEST PRICE QUOTED FOR MANY YEARS

The highest quality Diamond Ⓔ Manilla Twine is what we offer you. Nothing inferior about it; just a straight bargain offer. Guaranteed strong, smooth, even twine, and absolutely insect proof. Read our guarantee at the bottom of this page—it ought to set your mind at ease.

WE GUARANTEE THE QUALITY TO BE AS GOOD AS THE BEST ON THE MARKET TO-DAY

We want you not only to benefit by this offer but to tell your friends. You'll surely be doing them a favor. A chance like this to buy Binder Twine means a lot to most folks. We'll appreciate your kindness if you but spread the good news around: "Binder Twine, guaranteed quality, at a remarkably low price." That's interesting news to the thrifty buyer.

THERE'S NONE BETTER

It is as good Binder Twine as is made, strong as any made, smooth and even as any made. We say this regardless of make, brand or price. Our Diamond Ⓔ Brand Binder Twine is prepared with special care from the choicest Manilla hemp and first quality long fibre sizal, and is perfectly free from snarls, thin or uneven spots, and will measure 550 ft. to the pound; it is unusually strong, therefore every inch of it can be used.

EVERY BALL IS TESTED

Every foot of Diamond Ⓔ Brand Binder Twine is tested for uniform evenness and tensile strength. We guarantee our Twine to be entirely free from lumps, snarls or thin or uneven spots. Its smooth, even and uniform thickness allows it to be fed smoothly, and positively will not snarl or break, which means much in economy and saving of time.

GUARANTEED INSECT PROOF

We guarantee Diamond Ⓔ Brand Twine to be proof against destruction by grasshoppers, crickets and insects of all kinds, due to a preparation to which each ball of the twine is subjected. This is a very important, desirable and valuable feature and one which you will readily appreciate. We will esteem the courtesy greatly if you will tell your friends who use binder twine, and tell them that we will be glad to supply them with binder twine at the prices quoted in this Catalogue.

IF YOU LIVE IN ONTARIO
THE PRICE WILL BE

8.00 For 100 Lbs.

AND ALL FREIGHT CHARGES PAID BY US

IF YOU LIVE IN QUEBEC OR THE MARITIME PROVINCES
THE PRICE WILL BE

8.50 For 100 Lbs.

AND ALL FREIGHT CHARGES PAID BY US

PUT UP IN 5-lb. BALLS—50 lbs. TO THE BALE, COVERED WITH CANVAS AND LASHED WITH 22 FEET OF GOOD LAID ROPE

LOOK AT THE PRICE AGAIN—THEN LOOK AT THE GUARANTEE

Here are some Reasons why you are absolutely safe in buying Our Diamond Ⓔ Manilla Twine:

BECAUSE—It is superior in strength, will test 135 lbs. or more.
BECAUSE—It measures 550 feet to the pound.
BECAUSE—Every ball carries our trade mark, a guarantee of its excellence.
BECAUSE—Every foot is thoroughly inspected and tested. It carries an evenness throughout which makes it stronger and also work easily on the machine without knotting or breaking.
BECAUSE—Should the twine you buy from us be unsatisfactory for any reason, return it to us at our expense, and we will promptly return your money.

Order Early Send in your order promptly, to-day if possible. If you do not want us to ship the twine at once, say so in your order; state when you will want it, and we will ship it so it will reach you on the day specified—but in all events we would suggest that you order before July 1st. Thus you will have your order in and be sure to have the twine on hand ready for harvest, exactly on the day that you want it.

Our Binder Twine is as good as is made. There is no better twine made than our Diamond Ⓔ Brand Twine. You may pay more for binder twine, but you will not get better quality than ours, for there is nothing better made than our twine. The only difference between our twine and other good twine is the price. It will pay you to send your twine order to us.

Immediate Shipment. We have the binder twine on hand in our warehouse, and will ship all orders the day they are received. There will be no delay in shipping. You can rely on perfect service.

50 Pounds the Smallest Shipment. When ordering, please remember that we do not sell binder twine in quantities less than a 50-pound bale. We do not break bales.

OUR GUARANTEE PROTECTS YOU

We wish you to understand that you

RUN ABSOLUTELY NO RISK

In ordering Binder Twine from us, for if the twine is not exactly as represented, or not full count, or if for any reason whatever you do not think the twine is the best binder twine value you have ever seen after you have examined it, then you can

RETURN AT OUR EXPENSE,

and we will promptly return all the money you sent us, and include any money you may have paid out for transportation charges.

WE TAKE ALL THE RISK,

and if you are not satisfied with our binder twine, return it and

GET YOUR MONEY BACK,

rather than keep it and be dissatisfied, for we want your twine order next year and every year.

THE T. EATON Co LIMITED
TORONTO - CANADA

humus of the soils.

At the conclusion of the day all admitted that they had learned of possibilities of agriculture which they had not dreamt of before. Some even dared to hint that, had they known as much they might have been lead to choose farming rather than theology as their vocation. However, this was not the intention of the visit, for we need more ministers in these Maritime Provinces, as well as in other parts of Canada. It is our belief, however, that every thing which will forward the interest of our rural communities, will forward the interests of the church. Good results are bound to follow this visit of the Theologues to the Agricultural College and Farm.

It is anticipated that in the near future the Theologues of other denominations will also come to Truro as the guests of the Agricultural College and will personally see what is being and can be done for the Maritime Provinces by agricultural education.

RENNIE'S

XXX Quality Vegetable Seeds

Rennie's XXX Bush Green Pod Beans.

First in Spring. Last in Fall. Always Solid Meaty and Tender. Entirely stringless.
Packet 10c, 1 lb. 30c postpaid. Peck $2.50 5 lbs. $1.00, 1 lb. 25c by express at buyer's expense.

Rennie's XXX Bush Butter Beans.

A perfect type of cylinder podded dwarf wax Beans.
Packet 10c, 1 lb. 40c postpaid. Peck $3.75, 5 lbs. $1.50, 1 lb. 30c by express at buyer's expense.

Rennie's XXX Globe Beet.

The ideal Beet for table use. Deepest in color. Deliciously sweet. Exceedingly tender.
Packet 10c, 1 oz. 20c, ¼-lb. 35c, 1 lb. $1.00.

Rennie's XXX Early Summer Cabbage.

The best Second Early. Large oval round heads, 8 to 10 lbs. each.
Packet 10c, 1 oz. 30c, ¼-lb. 90c, 1 lb. $3.00.

Rennie's XXX Autumn-Winter Drumhead Cabbage.

Yields 20 to 30-lb. heads.
Packet 10c, 1 oz. 30c, ¼-lb. 90c, 1 lb. $2.75.

Rennie's XXX Golden Self-Blanching Celery.

Heavy, compact, thick, crisp and brittle.
Packet 10c, 1 oz. 75c, ¼-lb. $2.00.

Rennie's XXX Table Carrot.

Entirely coreless.
Packet 10c, 1 oz. 20c, ¼-lb. 60c, 1 lb. $2.00.

Rennie's XXX Snowball Cauliflower.

Sure header. Solid and compact. Outweighs all others.
Packet 25c.

Rennie's XXX Table Cucumber.

Early, prolific, continuously productive. The finest for slicing.
Packet 10c, 1 oz. 20c, ¼-lb. 60c, 1 lb. $1.90.

Rennie's XXX Earliest Round Scarlet Skin Tomato.

Packet 15c, ½-oz. 35c, 1 oz. 60c, ¼-lb. $2.00.

Rennie's XXX Pink Skin Tomato.

The best main crop variety. A continuous fruiter. Excellent shipper. Perfect keeper.
Packet 15c, ½-oz. 35c, 1 oz. 60c, ¼-lb. $2.00.

Further list next week. Catalogue free.

WM. RENNIE CO. LIMITED

190 McGill St., Montreal.

Cowan's Maple Buds

(NAME AND DESIGN REGISTERED)

are different from and better than any other chocolate confection you ever tasted. Maple Buds are not made by any other concern, as the name and design is fully patented. Look for the name on every Bud.

The Cowan Co. Limited, Toronto. 87

INVENTIONS Thoroughly protected by patent in all countries. EGERTON R. CASE, Registered U. S. Patent Attorney, TEMPLE BUILDING, TORONTO. Booklet on patents and drawing sheet on request.

Read every add in this issue. They will interest you.

More Farm Help Needed.

Editor Maritime Farmer:—

I believe your readers will agree with me that the most crying need of the agriculturist, in this Province, is the need of competent assistance on their farms.

As a result of the favorable impression that I have received of the Scotch farmer, as explained at Fredericton, I wrote to the Hon. Sydney Fisher, asking that the Dominion Immigration Department give us assistance to the same extent as it does the Western Provinces. I hoped to have a reply from his department before the Fredericton meeting but on my return home I found the following letter :

Ottawa, 19th Feb. 1910.

"Chas. Peters, Esq.,
Elmhurst, Kings Co., N. B.
Sir :—

"I beg to acknowledge the receipt "of your letter of the 11th, inst, for- "warded to me from the office of the "Hon. Sydney Fisher, Minister of "Agriculture, and to say that any "suggestions the Farmers' and Dairy- "men's Association, at their forth- "coming meeting at Fredericton, may "desire to offer in regard to immi- "gration will be considered as favor- "ably as possible.

Your obedient servant,
W. W. SCOTT.
Superintendent of Immigration."

Now, it is my opinion that we need these people, both to assist us on our farms, in some cases to become managers, and after gaining a little experience and confidence many of them would permanently settle in this country. I believe that by their industry, thrift and good agricultural methods they will succeed where some of our people fail.

There may be some people who do not see eye to eye with me in this matter, and I would be the last to be the father of an impractical suggestion. What I want is the ideas of the farmers of this Province re this matter.

I would suggest then, that the officers and members of the Farmers and Dairymen's Association, and every person, who is interested in this scheme, pro or con, would write to Mr. Scott at Ottawa, giving their needs and opinion.

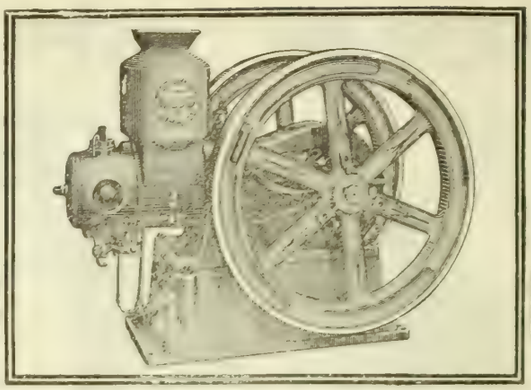
Surely it is worth the trouble to write and the letter goes free.

CHAS. PETERS.
Kings Co., N. B.

Lymphangitis.

Subscriber, writes:—I have a six year-old mare. About five months ago she appeared to get stiffin the right hind leg. After a time the cord near the bag began to swell and in about three hours the leg had swollen to the hoof. She was lame for about three days at the end of which time she did not appear to favor the leg although it was badly swollen and remained so for about three weeks when the swelling began to gradually disappear. The mare is now in good condition and seems to be in good health and is fed and watered regularly and she is not over-worked. What is the cause of the trouble and how should it be treated if it should appear again.

The condition was a mild attack of Lymphangitis or inflammation of the Lumphatus and surrounding tissue, sometimes called weed, shot of grease or Monday morning disease. It usually affects the hind legs. The



Olds Engines

Send for our new catologue.

YOU can learn engine facts you really should know before deciding on your gasoline engine.

The catalogue proves why it is good judgment to own an Olds engine and be sure you have the most practical, most economical, most durable rather than to get a cheap engine and take chances on losing all it costs you.

Besides the highest quality of workmanship and material the Olds Engine has many special and exclusive features. Each one means a great deal to you.

1. Removable water jacket—may save you $100 00.
2. Seager Patent Mixer has not a moving part to wear or get out of order.
3. No gasoline pump of any kind to leak or be primed
4. Cylinders and Pistons of special metal—ground to exact size.
5. Cylinder and head one piece—water cannot enter cylinder.
6. Safety Governor—positively prevents engine's running away.
7. Absolute guarantee—No REPAIR BILLS for the FIRST YEAR.

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Our grades of Alsike and Red Clovers, also Timothy, have all passed government inspection and are all sold in sealed bags, under the provisions of the Seed Control Act. Our Regal Brands of Alsike, Red and Lucerne Clovers and Timothy are all No. 1 Government Standard and are unexcelled for cleanness and purity. We solicit your order, which will have the best of care. Prices here.

CLOVER SEEDS

Per bushel, 60 lbs.	
Alsike, Regal, No. 1, G. S.	$ 9.50
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Alsike, Prime, No. 2, G. S.	7.50
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Permanent Pasture Mixture	3.10
Lawn Grass, Bruce's	3.50
Per bushel, 48 lbs.	
Hungarian	$1.40
Millet, German	1.75
do Common	1.40
do Japanese	2.88
do Pearl or Pencilaria	3.36
Timothy, Regal, No. 1, G. S.	3.00
Timothy, Choice, No. 1, G. S.	2.75
Timothy, Prime, No. 2, G. S.	2.50

Remit 25 Cents Each for Used, 30 Cents for New Two-Bushel Cotton bags

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JOHN A. BRUCE & COM'Y LIMITED HAMILTON, ONT.

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attack is generally very sudden, and in severe cases it is exceedingly painful and is accompanied by high fever and general disturbance.

Symptoms: First, a chill or shivering fit and uneasiness followed by pain and swelling inside the thigh, near the body, which may gradually extend down to the foot which is at first very sensitive to the touch. In a first attack; the symptoms increase for a day or two and then remain stationary for a few days. Then the pain subsides and the swelling reduces. In severe attacks, if improperly treated, abscesses may form and blood poisoning and death may be the result. In chronic cases, or after repeated attacks, the leg may become permanently enlarged when it is known as Elephantiasis.

Treatment:—Administer a purgative. For a medium sized horse, eight drams of Barbadoes Molasses, two drams of Ginger and one dram Solid Extract of Belladonna ad molasses sufficient to form a ball. For twenty-four hours feed only a light bran mash and often give small quantities of water. After that give, in feed three times a day, two drams of Saltpeter for three days, then twice a day for a week, feeding moderately after the first twenty-four hours. Bathe the leg, as soon as possible, with warm water and repeat two or three times a day. After bathing hand rub well and apply a liniment made by mixing half an ounce of Tincture of Camphor, half an ounce of Liquor Ammonia, one ounce of Laudanum and one pint of water, rubbing liniment well into the painful part. As soon as the pain subsides, give exercise daily and hand rub the leg after exercising. Keep loose in a box stall unless the weather is favorable to turn in a field which is preferable when the horse is not working.

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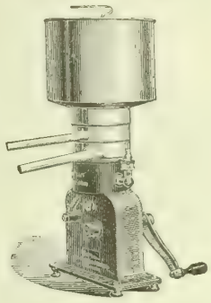

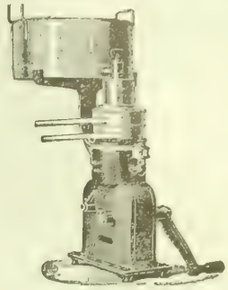

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Capacity:	160 lbs.	150 lbs.
Price:	$15	$20
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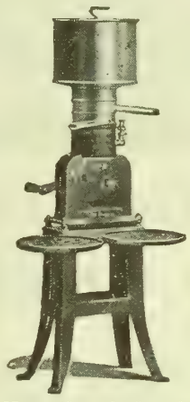

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St. John, N. B., Promises Its Greatest Show.

25,000---In Cash Prizes for Exhibits-----$25,000

Also Silver Trophies, Medals and Diplomas.

¶50 to 100 p. c. more money in horse awards.

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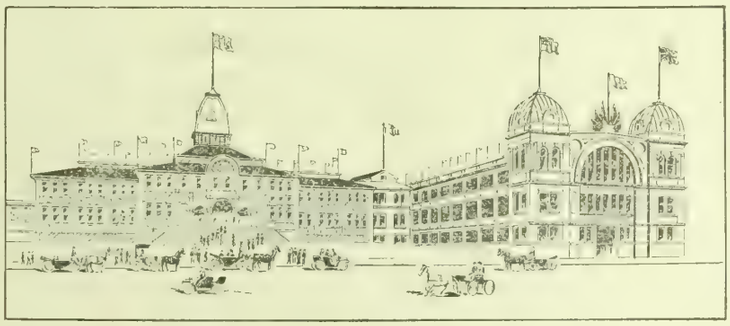

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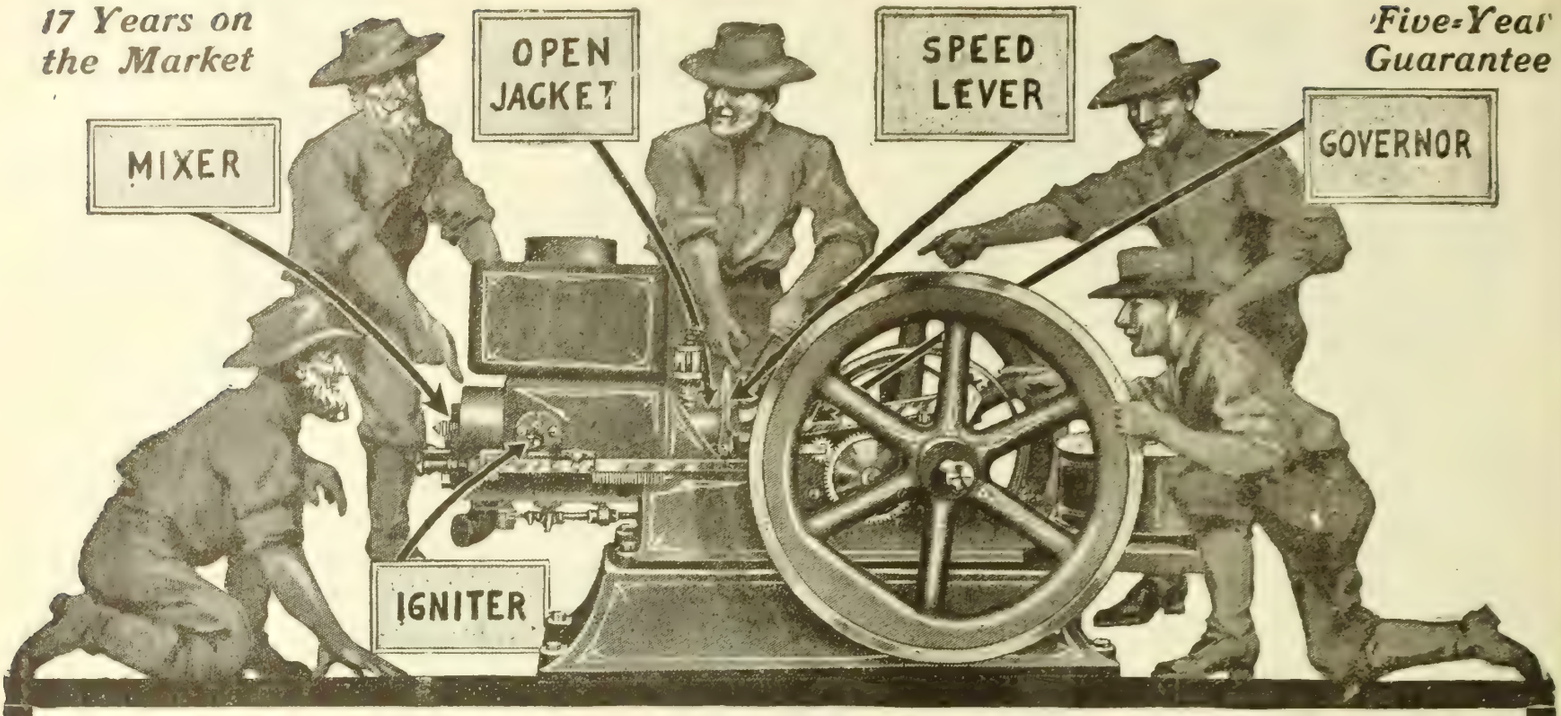

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Superior points of their construction are the open jacket, speed lever, governor, mixer and igniter. Our catalog describes these points fully.

WATERLOO BOY ENGINES are practical and reliable. They have few working parts, are so simple that anybody can run them, extremely economical in use of fuel, develop greater horse power than rated.

WATERLOO BOY ENGINES can be started when thermometer is twenty degrees below zero nearly as easy as in July.

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Waterloo Boy Engines are placed in your hands with an absolute five-year guarantee.

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You are thinking of buying a gasoline engine. You want to buy where you can get the best service, fairest treatment, best goods, for the least money.

We sell Waterloo Boy Engines through Implement Dealers. Every one of our Implement Dealers is our personal representative on the ground. His business is to see that you get a perfect engine, best service, fairest treatment. He is there to help you get the engine started and to see that it works right not only for thirty days after you buy it, but as long as you keep it. If the engine doesn't suit you after you have tried it he will take it back. If it suits you, **we guarantee it for five long years.**

Isn't it worth something to take the engine home the day you buy it? Have your dealer set it up and help you run it and look after it for you? Isn't it worth something to get your repairs from your dealer at the time you need them?

Can you get better service or fairer treatment anywhere else?

Factory Behind the Dealer

Behind our Implement Dealers stands our factory with its capital of $200,000, with its reputation of seventeen years' standing and with its five-year guarantee.

We have a factory big enough to build 100 engines a day or 30,000 a year.

Our Implement Dealers are simply our representatives. We name them a price that makes it possible for them to sell a high-grade satisfactory engine at an exceptionally low price. We put our dealers in position to sell you a Waterloo Boy Engine at nearly the same price that you would have to pay a Mail Order House for an engine that may not be nearly so good.

You and all your friends know who makes Waterloo Boy Engines. Few people know who makes the gasoline engines the Mail Order Houses sell.

Isn't it worth something to know who makes the gasoline engine you expect to buy? Isn't it worth something to know that behind that gasoline engine stands the factory that made it with its reputation to maintain and with its iron-clad guarantee? Isn't it worth something to you to know that even 20 years after you have bought the engine you can get repairs through your local dealer? Isn't it worth something to buy a strictly high-grade Waterloo Boy Engine at an exceptionally low price, and have a man on the ground who is your friend, to look after your interests in dealing with the Company from which you buy your gasoline engine?

When we urge you to buy a Waterloo Boy Engine through our Implement Dealer we are seeking your best good.

If you want the best service, fairest treatment, best goods at the lowest price, write today for our gasoline engine catalog

WATERLOO GASOLINE ENGINE COMPANY, 3d Ave., WATERLOO, IOWA.

J. D. FRIER, Eastern Representative, SUSSEX, N. B.

Do not write the makers, as I am nearer to you and catalogue will reach you quicker by writing me.

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AND
CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., April 26, 1910. Number 14.

Noxious Weed Seeds---Learn to Recognize Them

Every Farmer Interested

GOVERNMENT STANDARD SEED.

Purchasers of red clover, alsike and timothy seeds who want a good clean seed should see to it that the seeds they buy are clearly represented by a reliable person or firm to be of first quality, by being marked "No. 1," "Prime," "Fancy," "XXX," or such other designation for which a special standard of purity and vitality is fixed in section 4 of the Seed Control Act.

"Government Standard" is a term coined by seed vendors and may be misleading unless clearly understood. Section 4 of the Act fixes a standard of quality in respect to weed seeds, below which timothy, alsike and red clover seeds are not allowed to be sold for seeding, either by farmers or seed merchants. This standard allows of the weed seeds named in the Act about 90 in one ounce of red clover, 200 in one ounce of alsike, or 4000 in one ounce of timothy seed, It is to seeds that will pass this lower standard but are not sufficiently clean to grade "No 1" that the term "Government Standard" was attached last season.

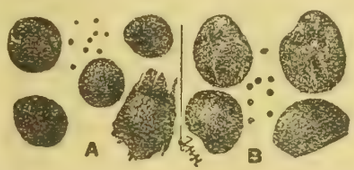
Some seed vendors have advertised seeds under "Government Seal." No Government seal is used on any seeds offered for sale in the trade. Some reliable seed houses sell grass and clover seed sealed by them and for which they alone are held responsible so long as the seal remains intact, but not after it is broken.

To avoid the provisions of section 3 of the Act, which applies mainly to seed grain, some seed vendors represented to farmers that, on account of the Seed Control Act, they are offering their grain for sale for milling or feeding purposes. If offered for sale for seeding, such vendors are required to make clear to intending purchasers that the seed contains wild oats, wild mustard, cockle, and such other noxious weed seeds when they are in the seed. The object of the Act is to protect farmers who want to protect themselves against such weeds. It provides the means for farmers to buy seed intelligently. Farmers who deliberately buy feed grain and use it for seed can scarcely hope for legislation that will protect them from loss on account of noxious weeds.

Strive to protect yourself against the importation of noxious weed seeds by learning to recognize them and by carefully examining samples before you buy.

In a broad sense everything that is not the same seed as that sown is a weed in that field; for example, timothy in a clover field, or any other kind of clover than that sown, or any other plant may be regarded as a weed. We are talking now of weeds, and particularly of noxious weeds; for there are a good many weed seeds in clover which are objectionable, mainly because they oblige the farmer to pay a higher price. These weeds are already so plentiful on the ordinary farm that a small or even a considerable amount found in clover seed will not materially increase the supply of weeds on the farm; but the farmer does not want to pay from eight to ten dollars a bushel for weed seeds which he really has in abundance.

There are several varieties of weeds which are particularly noxious and are not usually found on the farm unless they are imported in clover or some other seed. In order that our readers may become acquainted with the different weed seeds common in clover seed, we give herewith a cut of over thirty varieties, frequently found in clover seed.



Dodder; A, clover dodder; B, field dodder.

A small case, containing a lot of little bottles that contain samples of the different noxious weeds that grow in Canada may be procured at a normal figure from the Department of Agriculture, Ottawa. The Ontario Agricultural College, Guelph, also supplies small cases of weed seed samples for about 25 cents, Every farmer should have one of these for their guidance in seed inspection.

COMMON IMPURITIES OF CLOVER SEED.—1, bracted plantain; 2, black-seeded plantain; ragweed; 4, ox-eye daisy; 5, red clover seed; 6, catmint; 7, crab grass, 8, field dodder; 9, sorrel; 10, dog fennel; 11, chickweed; 12, lamb's quarters; 13, green foxtail; 14, pricklsida; 15, vervain; 16, madder; 17, yellow foxtail; 18, clover dodder; 19, heal all; 20, yellow trefoil; 21, spurge; 22, curled dock; 23, ladie's thumb; 24, buckhorn, rounded face; grooved face shown in 29; 25, mustard; 26, alsike clover; 27, ox-tongue; 28, pigweed; 29, buckhorn grooved face; 30, Canada thistle, 31, campion; 32, wild geranium; 33, peppergrass, 34, camomile; 35, mallow.

The farmer will say: That's all right I can see these seeds very clearly in the illustration, for they are magnified; but how am I to detect them in clover seed? You cannot do it unless you get a magnifying glass. This will cost you from fifty centy to a dollar, and you can get one from your seedsman or at a book store. You need this glass anyhow for examining any number of other things on the farm that you aught to want to look at and your children will certainly want to look at. These cuts will do you no good unless you supply yourself with a magnifying glass of some kind. Now take a sheet of white paper and put a sample of your seed on it. Familiarize yourself thoroughly with these noxious weed seeds. Then take your microscope and examine the sample of grass seed for these noxious seeds. To help our readers in this examination we have had a number of smaller cuts made. The smaller illustrations in each of these smaller cuts show the seed in its actual size.

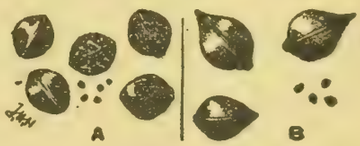
One of the weeds you want to look for is dodder. There are two kinds of it, clover dodder and field dodder. In order that you may familiarize yourself thoroughly with this pest, which has been bought in clover through imported seed, we publish an illustration of each of these, the familiar figures in the cut indicating the natural size of the seed, and the larger ones the size as magnified.

A, buckhorn; B, bracted plantain.

Next in order with respect to its noxious qualities we would put buckhorn and bracted plantain. You will notice in the cut given below these two seeds are much alike, and they are frequently mistaken one for the other. It is not so important that you should be able to distinguish between the seeds of buckhorn and bracted plantain, as that you may know them both when you see them.

A, black-seeded plantain; B, common broad-leaved plantain.

Two of the plantains follow in the next cut, the black-seeded plantain and the common broad-leaved variety. The common broad-leaved plantain is not a particularly noxious weed, and is found more or less on some farms; but the black-seeded plantain is very common in red clover, and is identified not merely by its seed, but by broad leaves and slender flower stalks. It will be noticed that the scar is a whitish spot in the middle of one flattened face, while in bracted plantain the groove on one face is margined with white. None of these can be wholly removed from red clover, and hence samples having these seeds in them should be rejected and never sown where it is possible to avoid it.

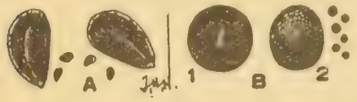


A, sorrel; B; curled dock.

Another of the weeds of which farmers complain is curled dock, a cut of which together with sorrel we give below. Many of our readers have seen a beech nut. The seed of the curled dock is as near like it in shape as anything you are likely to find. It is very easy to pick it out, and it should be kept out of the meadows at all hazards, because it is a deep-rooted perennial and will give you trouble. The last year or two we have had a good many complaints of sheep sorrel, and as it is closely related to the docks, we give an illustration of the seed in the same cut.

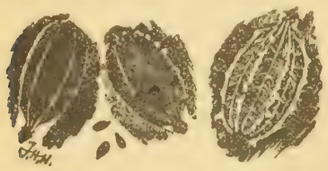
A, yellow foxtail; B, green foxtail.

Every farmer knows foxtail, although we have not been able to distinguish between the two varieties the yellow and the green. We give illustrations of both varieties. The seeds of foxtail are so nearly the size of clover that it is very difficult to remove them. The seeds of yellow foxtail are flat on one side and round on the other; color, brown or yellowish. Green foxtail seeds are brown or straw-colored, the darker ones being mottled and covered with a thin whitish hull.



A, peppergrass; B, mustard; 1, charlock; 2, black mustard.

In various sections of our country there is a good deal of pepper grassand mustard, and it is well for our readers to know the seed, which they can by carefully examining the cut below.



Wild carrot.

Another of the bad weeds coming in lately is the wild carrot, which is found to be one of the worst pests of the clover meadow, many of the eastern meadows being white with it in August and September. It is a long tap root which renders it very persistant; and where this weed has not become established it is important to keep it out by not bringing the seed to the farm in red clover seed. Anyone can recognize it by close examination of the above cut.

A, ragweed; B, ox-eye daisy.

Western farms are plentifully supplied with ragweed, although not every farmer may recognize the seed at first sight. It is important, however, that he should recognize ox-eye daisy, which-while troublesome on some farms, will become more so if farmers are not more careful. It has a beautiful flower, and like as not the good wife, if she finds it in the pasture, will dig it up and plant it in the garden, and call it a "marguerite." In fact, a large proportion of the murguerites sold in the market are simply ox-eye daisy. Therefore it will be well to take a good look at it and see whether there is any of it among your clover seed.

A, Canada thistle; B, dog's-fennel; C, scentless camomile.

We have had a great deal of correspondence lately with reference to Canada thistle, and we would not do our readers justice if we did not enable them to recognize it when they see it It is one of the easiest seeds identified, as will be seen by looking at the cut. We have in the same picture an illustration of our old friend, dog's fennel, and also of camomile, neither of which may be considered noxious, but while looking at weed seeds it is well to familiarize yourself with them.

A, pigweed; B, lamb's quarters.

While you are at it, you might as well get acquainted with pigweed and lamb's quarter, both common weeds and undesirable in clover seed at eight to ten dollars a bushel.

A number of our readers are sowing alfalfa and it is important that they should understand the adulterations

FIG. 22.

FIG. 23.

Fig. 22 A, Alfalfa; B, trefoil.
Fig. 23, A and B, the two kinds of bur clover used as alfalfa seed adulterants.

usually found in the seed. We give first an illustration of alfalfa seed, and in connection with it one of yellow trefoil, which is used as an adulterant, particularly in imported seed, and in addition the two varieties of our clover which are used for the same purpose.

The bur clover grows in California, and it is valuable in that country as sheep feed. The wool is exported to Germany and other European countries, the seeds removed in carding and sold at about two cent a pound to adulterate alfalfa seed sold at from twelve to fifteen cents a pound. If in your sowing of alfalfa you unfortunately get some of

FIG. 24.

FIG. 25.

Fig. 24, A, gum weed; B, sweet clover; C, false flax.
Fig. 25, Alfalfa dodders—A, small-seeded dodder; B, large-seeded dodder.

this foreign seed, the result will be that it will have to be plowed up at considerable expense and loss.

In the next figure we give an illustration of a number of bad weeds that may be found in alfalfa, which need no further explanation. Farmers should be especially careful to examine alfalfa seed for the presence of the dodders that are often found therein. Most of the weeds found in clover seed will also be found in alfalfa, but of these we have already given illustrations.

Drainage pays from Twenty to Fifty Per cent. on the Investment.

Editor Maritime Farmer:—

Dear Sir:—

There are thousands of acres of waste land in Nova Scotia, growing only sedges, rushes and wild grasses, there are alder swamps left because they are too wet to cultivate, then there are thousands of acres that have been farmed for long periods, but have never produced what they should, which might by drainage be the most fertile lands we have and be made to "blossom as the rose." No cultivated agricultural plant will (with few exceptions) flourish in free water and only acquatic plants will.

An English authority says: "There is little of the land of Great Britain naturally so dry as not to be susceptible of improvement by artificial drainage, for land is not in perfect condition with respect to drainage, unless all the rain that falls upon it can sink down to the minimum depth for the healthy development of the roots of cultivated plants."

A report on conditions of drainage in New York sixty years ago said: "There was not more than one farm in seventy-five but that needed draining—much draining, every wheat field would produce a better crop if properly drained," and that no farmer could raise a good crop of grain on wet ground, or in a field where pools of water became masses of ice in winter.

In such cases the grain or clover plants are usually frozen out and perish, or if they survive they never arrive at maturity. Land that requires draining is that which at some time during the year, becomes filled with water that does not find a natural outlet but remains until removed by evaporation. Any considerable addition to its water, wells up and soaks the service and that which is added after it is full must flow off over the surface or lie in puddles upon it. Land that at some time during the period of vegetation contains free water, at least in its subsoil, within reach of the roots of ordinary crops in which there is no free outlet at the bottom, is in the same condition as of a box without an outlet at the bottom, has no means of escape except evaporation. All lands on which the water of heavy rains stands for some time on its surface, needs draining. All lands that contain too much water at any season of the year needs draining. Baking and cracking clay soil needs draining; lands heaving out the plants by alternate freezing and thawing; lands that "puddle" with the spring and fall rains and every heavy rain fall needs draining. In fact all land needing drainage hangs out the sign of its condition more or less according to its circumstances.

Rain is the principal source of moisture and a surplus of moisture is the evil against which we contend. Rain is also a great source of fertility, not only because of its action of dissolving the elements of fertility, but because it contains or brings with it from the atmosphere valuable fertilizing substances. About 41 inches is the general average of the rainfall of Nova Scotia. According to reports this would supply as much ammonia to the soil as three hundred pounds of commercial fertilizer. This ammonia acting on the ingredients of the soil, produces disintergration and renders available the locked-up ingredients which the soils hold. Before these can be used by any plant they must be rendered soluble, this can only be affected by the access of rain and air through the soil. So the rain not only brings water but food for the plants and while the surplus moisture should be removed it should first be conducted through the soil far enough to leave its fertility and not run off as surface water.

Drainage prevents surface washing, by receiving the rains where they fall and at once taking them up. It also lengthens the season for labor and vegetation. It warms the soil by the free passage of warm air and water. The evaporation of water renders the soil cold, a saturated soil that has no means of getting clear of its free water but by evaporation is neccessarily cold. To change water into vapor requires heat that should not leave but be kept there for the growing plants. It is said the evaporation of one pound of water will lower the temperature of 100 lbs. of soil ten degrees and that an underdrained soil is from six to fifteen degrees warmer than soil cooled by surface evaporation.

An open and mellow condition of the soil is always favorable to the growth of plants. Land that is well cultivated and drained will better withstand summer droughts, as they by their underdrains are better able to gather heat, admit air and moisture and enable them to take up the materials on which they live and by which they grow. In a saturated soil every space between the particles is filled with water to the exclusion of the air.

In Great Britain the average annual rainfall is about 20 inches, they have over one million acres underdrained, and they claim that at least one-half of their lands need thorough underdraining, it is clearly seen then how much more underdraining is needed in Nova Scotia when our rainfal, is about double what it is in Great Britain and having much greater heat and a clearer sky the evaporation is very much greater. Hence the greater need of passing the water through the soil by drainage, the character of the soil being the same.

The first cost of draining is what frightens many farmers from attempting it. Draining where it is needed should be regarded as an investment of capital. The farmer's land, stock, implements and his yearly labor are regarded as his capital. All that he can make by the management of these is the profit of his business. But to drain cash capital is required. If he has not this, he need not hesitate long to pay a reasonable rate of interest, if he can see that there is a fair prospect of making a much larger profit than the rate of interest he is obliged to pay. Enough has been said and written concerning the profits of draining to satisfy owners of wet lands that it is better to drain such lands than to spend money in clearing new land or in buying more.

Let the farmer estimate the cost carefully and compare it with the expected gain, then his investigation and figures will show that he does not need the advice of any one as to whether he is right in draining because some one else says to drain.

The evidence of scores of farmers upon the subject of profit is, that draining pays from twenty-five to fifty per cent on the investment.

C. HECTOR CUTTEN.

Patriotic Agriculture

At the evening meeting of the Kings County Farmers' Association held in Berwick on March 26, 1910, Mr. McRae of Ottawa, an authority on horses and live stock, gave an address calculated to inspire the audience, and to move the least enthusiastic member to appreciate the agricultural possibilities of Nova Scotia.

The Berwick Brass Band had just finished playing selections which wound up with "Home Sweet Home" from which Mr. McRae evidently took his text. He began by saying:—

"There are a good many stragglers in the West, who, when they hear the bands play "Home Sweet Home" wish that they were back again. He had travelled much in Canada and the United States and he failed to see where the great Western fruit districts had any advantage over those of the East. The Okanagen Valley was reported to be very wonderful, but there they have real estate men who are hustlers. If those same men wrote up this valley in the same way they write up their own—the people would not know theirown farms!

The Western fellow booms up his own country, in fact there is too much bossting in the West. If you want to build

(Continued on page 457).

Formalin Treatment for Smut.

It is time now that farmers, who intend to sow either oats or wheat, shauld determine whether they are to have from five to twenty per cent. of it destroyed by smut, or have the smut reduced to one per cent. or possibly one half of one per cent. They can do as they like about it, but we wish them to know that it is in their power to get rid of this loose smut at an expense of about five cents an acre, including labor. It is simply a question of whether they are willing to go to the trouble and trifling expense or whether they prefer to take their chances of having their crops—grown on land which they own and pay taxes on or rent—which they plough, sow, harvest and thresh, reduced, in favorable season, five per cent., and in an unfavorable one, twenty, with an average of perhaps ten per cent. There was a time when we were helpless against this enemy of small grain. Thanks to Professor Bolley, of the North Dakota Experiment Station, we are helpless no longer. In treating your oats or wheat with a formalin, you are taking no chances except that of getting formalin of the proper strength and using it in the proper way. The way to do is to buy, from a responsible druggist, a pound of formalin for every fifty bushels of grain you expect to sow. You should put a pound of formalin in forty-five gallons of water, say a barrel. We have heretofore recommended fifty gallons of water to the pound, but find that this is scarcely strong enough. We have also formerly recommended using a gallon of this formalized water to a bushel of oats. This is probably a little too much; probably three-fourths of a gallon would be sufficient. The question now is how to apply it. There are two ways. One is to have two or three barrels partly full. Have your oats in a sack or wire basket; lower it into the barrel and move it up and down enough to get every grain wet. The other way is to take a warm day in the spring, spread your oats or wheat out on the barn floor, say an inch thick, fill a surinkling can with the formalized water and sprinkle the oats thoroughly with it. Then put on more oats or wheat and sprinkle again and so on. When wet, whether dipped or sprinkled, take your shovel and stir it thoroughly, so as to be sure that every grain is treated. Then put it up in a long, slim pile, put some gunny sacks over it and let it remain eight or ten hours. Then remove the gunny sacks and shovel it back and forth until it is dry. This will not interfere with the sowing of oats, either by hand or with the seeder. Can not any farmer go to this small expense and trouble? Which is harder, to do this little job, which can be done any time when there is not freezing weather, but preferably just before sowing, or to lose say ten per cent. of your wheat or oat crop from smut and besides, pollute your farm and be a menace to your neighbor's farm? That is not all. Just for curiosity leave enough seed untreated for an acre, using the same king of seed, sowing the same day and on the same kind of land. Then notice, during the summer, how this acre grows compared with the acre sowed with the oats treated for smut. You will find that the treated oats will start strong in the spring, wil, grow right along, manifesting a vigorous growth all summer, while the others will act as though they are sick. Thousands of farmers have done this at our suggestion, and this is what they tell us. We hope our new subscribers, who have never become familiar with the smut treatment, will take their own experience. Some inquiring boy will ask' "How does the smut grow anyhow?" Smut is a parasitic plant, entirely separate from the oat or wheat plant, and ripening its fruit (the smut spores) before the grain is ripened. Smut could not propagate itself if it did not thus, so to speak, take time by the forelock. The wind blows this off into the sound plants in the same fields or in other fields. This little smut spore gets down between the hull and grain, ready to be sown the next spring; so that it is literally true that the farmer grows smut and must grow it unless in some way he kills this smut without, at the same time, destroying the germinating power of the oat plant. The farmer may say: "I have never seen smut growing on my oat crop." There are a great many things growing right before your eyes that you can't see and don't see; but we do not always need to see things in order to be fully aware of their existence. The subject has been investigated so thoroughly that there is no possibility for any mistakes about it. Someone may ask: "Do all smuts grow in this way?" They all grow within the stock, but they are not all propagated in the same way. Corn smut, for instance, is not planted with the grain. It finds access to the stalk through breaks in the epidermis, or, so to speak, skin of the stalk, and then grows within the stalk, manifesting itself in ways entirely familiar to the farmer. Hence formalin (which we may say here, is formaldehyde, forty per cent.) is of use for oats; but notwithstandno use in treating corn for smut. It ing all that the experiment stations may say, we doubt if it is as effective for the loose smut of wheat as it is for the loose smut of oats and barley. Some readers may ask: "Is there no other way?" The hot water treatment is even more effective than formalin; but the trouble is that it injures the germinating power of the grain and the amount of seed must be doubled in order to secure a full stand. Besides it is much more difficult to treat oats with the hot water er treatment than with formalin. In the hot water treatment, the temperature must not be below 133 nor 138 degrees, Farenheit; and what farmer is going to camp out in the yard or the garden with a kettle of hot water and one of cold, and a thermometer, and monkey the time away treating three or four bushels of oats at a time, losing half the oats? It should not take any man very long to determine what he should do in this case. Use formalin, and look no farther.

Potato Growing.

The potato is partial to good soil, perhaps more so than any other farm crop. Although it readily adapts itself to almost all kinds of soil it is highly important that one of a light nature be selected if best results are sought for. The light soil permits the potato to attain a larger size than it would in heavy ground because the resistance to growth is less in the former case.

A fertile sandy loam, well supplied with decayed plant material and with a good natural drainage, is quite desirable for a good yield. Heavier soils may be readily made available for potato raising by proper drainage, by a generous application of barnyard manure, or by plowing under green crops. Heavy clay land is the poorest kind for growing this crop, and should not be used if the farm has a tract of lighter soils. will te,l you the type and variety Exuerts claim that a better quality of potato can be grown upon a sandy soil than upon any other; to be sure there must be sufficient organic matter present to add fertility.

The 1909 Agricultural Report for Nova Scotia contains the following advice on potato fertilizing:

"In the article on potato growing by John Donaldson, the following mixture per acre is recommended for potatoes:

75 pounds nitrate of soda.
300 pounds acid phosphate.
150 pounds muriate of potash.

"If the farmer has bought these three standard fertilizers, he could easily weigh out the exact number of pounds stated, or a proportionate number of pounds, on a barn floor, and with a square mouth shovel he could very easily make an even mixture of these. About the only difficulty he would experience would be that the nitrate of soda might be some what lumpy. To overcome this, a number of farmers could club together and buy a small hand power fertilizer grinder. However, for ourselves, we have found no difficulty in breaking up the lumps by means of a post or rammer similar to that which one would use in preparing a foundation for a cement floor. Aenerally, we would advise applying very shortly after mixing, for if allowed to stand for some time, such a mixture may again become lumpy. This mixture is a very concentrated one, and would cost about $33 per ton. It will contain as much plant food as the average $40 mixture. Owing to its concentrated character, it should be applied as evenly as possible Some would recommend adding 25 per cent. or more of gypsum, which would make the mixture more bulky, and would be of value on any lands requiring lime. We, ourselves, would usually mix with the above 200 or 300 pounds of bone meal, and perhaps an equal quantity of basic slag, and if our larm were deficient in barnyard manure, which supplies organic nitrogen, we wodld add 200 or 300 pounds of blood meal, or tankage, or fish refuse as a source of organic nitrogen. We would apply the mixture, as completed, at the tate of from 500 to 1,000 pounds per acre, depending upon the richness of the land.

"Many other mixtures might be recommend any benefit proportions commend any hefinite proportions for the reason that we believe that every farmer should experiment and ascertain for himself. The following, however, are some mixtures High Grade English Potato Mixture. which have elsewhere given good results:

	Lbs	Cost About
Sodium nitrate	250	$ 7.50
Sulphate of ammonia.....	250	8.00
Acid phosphate 1150		10.35
Sulphate of potash.....	250	8.75
Total .....:	2000	$35.60

"This mixture contains 4.2 per cent. nitrogen, 7.5 per cent. phosuhoric acid and 8.5 per cent. potash, all of which are immediately available. If one were using considerable barnyard manure and had plowed under a clover sod he could use a smaller amount of sodium nitrate and sulphate of ammonia."

Rotation of crops has a decided influence on the potato crop. It is also quite important that the mechanical make up of the soil be favorable. The potato requires an abundannce of moisture, the most of which must be withdrawn from the surrounding soil. The moisture holding properties of the soil depends upon its mechanical condition, and this in turn, upon the method and time of plowing, mixture with organic substances and suitable fertilizers. The presence of humus is one most essential factors in the way of proper soil preparation for the potato, as it aids in holding moisture, stores heat and renders available nitrogenous matter for the potato's use.

Potatoes should not be followed immediately by a second crop of potatoes, as the soil needs the change and rest brought on by proper rotation. A successful potato grower recommends as a three year rotation clover, potatoes, wheat.

In regard to plowing; Early breaking is most advantageous as it will exterminate the pestiferous insects, chief among which is the grub worm, and will make the ground solid, through settling, before the seed is ulanted, thereby insuring a moisture retaining stratum of earth to offset the evil effects of possible drodghts.

The seed potatoes should be selected with great care. Burbank's method is by far the best and most sensible. It is as follows: When digging potatoes select the seed from what were the most thrifty stalks and from the most promising looking tubers. Carry your seed basket into the field and gather the best potatoes from the best producing plants. If this is followed faithfully there will never be a shortage in the potato crop as far as the seed is concerned.

The seed potato should be cut into pieces large enough to contain at least two eyes, as a great deal of the vitality depends upon the size of the piece. After being cut they should be planted within twenty-four hours for satisfactory results, although it is known that the seed pieces can be kept for several days in proper storage conditions without injury.

Potatoes should be planted at a depth of 4 inches, and from 12 to 15 inches between seed pieces, in rows about 3 feet apart. Of course, where the drill is used these conditions will vary. With the earlier varieties it is best to plant them as soon as possible after the danger fromfrost is over. Before the sprouts are above ground it is a very good plan to harrow the ground several times. This will save an after struggle with weeds and loosen up the crusted surface to allow the new shoots to come through better and easier. After the potatoes have gotten a fair start, set the cultivator to work and keep it going at intervals of seven days until the vines shade the land, and nature will do the rest and reward you with a good harvest.

Some of the old standard potatoes were deep eyed, coarse, watery and of variegated colors. Farmers who persist in growing these varieties which have been discarded as unsuitable for market requirements find it a difficult matter to dispose of their crops; dealers do not want to buy such potatoes at any price, and not infrequently one may see a farmer returning to his farm from the railroad station or steamboat landing, with his load of potatoes, because the dealer found they were of a quality that he could not place on the market.

Grow white varieties that are smooth skinned, shallow eyed, mealy and of uniform size. If you have not already procured your seed potatoes inquire of your dealer and he will tell you the type and variety he could handle to the best mutual advantage. It is simply folly to grow varieties that are not saleable. Green Mountains, Delewares and Irish Cobblers are some of the most popular main crop potatoes. If you grow these varieties or some others like them you will have no difficulty in disposing of your potato crop.

New varieties are produced, every year, generally from the seed balls; but very few of them attain any degree of usefulness or popularity.

Potato culture cannot be carried

(Continued on page 452.)

THE MARITIME FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

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MAKING MEN GOOD BY LAW.

So often has the statement that "you cannot make men good by law" been repeated that some men have come to believe it true. Yet all law is for the purpose of making men good, and if the statement be true there is no need for laws.

The law does not deal with the consciences of men, directly. Only acts are forbidden and punished. Thoughts, purposes, intentions, motives, are not punished. Sometimes motive is important, to determine the quality of the act; but the act alone is punished.

It is the purpose of the law to make men good; and if the statement quoted be true, then all law is a colossal failure. But we know that some men are made good, relatively, by law. Some men are restrained in desire to commit thefts. Some are restrained in desire to commit murder. Others are restrained in desire to commit other offenses. The purpose of the law is to prevent the commission of crime, or to compel men to do what is right. And men who refrain from doing wrong by reason of fear of the law ; and men who do right because they fear not to do so; are better for their actions, regardless of desires.

The direct action of the law which compells men to do right, and which prevents them from doing wrong, is moral in effect, and in this way men are made better by law. There is an indirect effect of law which tends to make men better. When society has condemned an act, and has denounced it by law, every good citizen upholds the law, and does not hesitate to condemn the act denounced. The moral effect of this is great, and in time people come to regard the act as so immoral that they condemn the man who commits it. This is what we call public sentiment, or public opinion. We all know the immense power of "public opinion."

There was a time on the frontier when theft of horses was not punished. It was dangerous to condem it too openly. And there was also a time when human life was held to be of little consequence. The "gun man" and his friend did not allow much discussion. Theft and murder were all too common. When society became strong enough it put the thieves in the penitentiary; and the "gun men" were either hanged or they sought other locations. Now, does anyone believe that "moral suasion" brought the desired changes ?"

By the time society was able to maintain the law, sentiment had changed, and public opinion had made the horse-thief and the "gun man" unpopular. But could society have brought this change in opinion without the strong arm of the law?

Whatever is injurious to society may properly be prevented by society. This is because society has the right to protect itself, and the rights of its members.

You may not be able to make a man virtuous by statutory enactment ; but if a man has a desire to kill you, and if the law restrains him in this desire, then so far as you are concerned, he has been made good by law. With his conscience the authorities may not concern themselves, but the law makes his evil passion of no effect against you ; and so you are safe, under the protection of the law.

The same may be said of every act which would injure another, when the act is denounced by law. The power of society to protect itself is limited only by the necessity. Whatever is necessary to be done may properly be done. No one can have the right to do an act which will be evil in its consequences to society.

We are told, sometimes, that the law cannot restrain certain acts; and that efforts to restrain certain acts have always been futile. Now, if there be any acts which are evil in their effects upon society, then society should restrain those acts. and if the people who committed those acts declare that the law cannot be made effective against them, then the need for action becomes great, and the need to restrain such men in their evil acts is of great importanne. Such acts, accompanied by such declarations, show want of respect for law, and for the rights of society. Such declarations are as if the man who made them should say, "We are above the law, and shall do as we please, without regard to the rights of society."

In a land where license does not prevail, and where civil liberty is valued, no one should be allowed to place himself above the law; or to defy the authorities who are charged with enforcement of of law. If many people did this there would not be civil liberty, but anarchy ; and what many men may not do, a few should not be permitted to do.

It would be well if everyone should draw the clear distinction between civil liberty, which is the creature of the law, and license, which is either without law or in defiance of law. Savages have that natural liberty which many profess to desire, but which is not of great value ; but civilized people have civil liberty, which can only exist when the rights of all are safeguarded by law.

If we will think out the subject for ourselves we shall find that our greatest liberties would be impossible without law, since those who are stronger than we could at any time take away our liberties, or so treat us as to make them of little value.

Some men do not need law to compel them to be good, but there are others who need the law to restrain them; and all men need the direction of the law, since otherwise each man's conscience would be his law. And of consciences there would be variety.

The men who declare that "men cannot be made good by law," are generally men who do not wish to be restrained in evil-doing ; and for these the need for wholesome restrain is greatest.

THE MEASURE OF SUCCESS.

The measure of success in this world lies in the man not the occupation. To-day with high prices prevailing for food products the officers of our Building and Loan Associations tell me that the laboring men are, as a rule, meeting their payments promptly, yet the averagd business man finds it hard to harmonize the problems. It is the man who counts the cost and brings his expenses within his income who succeeds and this has a world wide application. In every industry it is the maximum product produced at minimum cost which must be sought. The man who grows an acre of potatoes if he follows general practice will put in, in the form of labor, seed and fertilizers, from eighty to eighty-five dollars. He must be seeking the maximum product in order to realize. Two hundred bushels will hardly cover expenses unless prices are exceptionally high. It is a simple proposition to put this on paper, but skill, labor and intelligence alone can work out the problem. The principle is right but each individual must find the solution for himself. This explains why, in all industrial life, so many wrecks are found, so many shops, mills, factories are deserted, so many failures reported. The trouble is not with the industries but the individuals, for right alongside other individuals in the same lines of work reap success.

The panacea lies not in legislation to force others to change but in seeking to find the largest output per animal, or acre, or tree, at the lowest cost. One swallow does not make a summer and one failure or success does not settle the question. It takes a series of years to balance the accounts properly but meanwhile there can be no let up in the demands on the individual to seek to grasp the details of the whole problem.

There's no easy road to success in this world and never will be, but he who counts the cost, and lives within his income is always safe. The struggle comes in trying to lift the income and that struggle is universal.

IMPORTANCE OF GOOD FARM MACHINERY.

Much of the great progress made in agriculture within recent years has been due to the use of improved farming implements. Since farm machinery has come into general use, much of the drudgery of farm life has vanished. As a result, there has been a great improvement in the social and economic conditions of rural society. The judicious use of improved farm machinery enables the planter to cultivate more land, till it easier and do better work. It is much easier to operate a labor-saving machine than to bend the back from dawn till dark with a hand tool. Besides, there is always a stronger motive for doing good work when strength is saved. Where the work is irksome, enthusiasm and interest are apt to be lacking.

The proper use of labor-saving tools has greatly increased the earning capacity of the American farm. The working day of the farm hand has in most cases been shortened and more opportunity given for recreation and study. This fact is noteworthy. Improved tools, intelligently used, mean more and better crops.

Farm machinery requires intelligence. Wages has therefore gradually increased. Men qualified to operate machinery usually have employment and receive fair wages. Hands are more efficient and. consequently, become more proficient by the use of good tools.

The evolution of farm machinery has elevated woman from a producer in the field to a home-maker. In every country where crude handtools are used, woman has been forced to work in the field. Today, when it becomes necessary for a woman to earn her own bread on the farm, it can usually be done without impairing her health.

Good labor-saving implements do much to make farm life attractive to boys. They naturally like to operate machines and usually take pride in the handling and care of tools. Good implements are necessary, and no farm should be without them. They save money.

EDITORIAL NOTES.

Breed up, not down. Breed to something better than you already have. Breeding a mare to a stallion only her equal, is standing still. Breed to the best within your reach. In the end breeding up means profit and progress, while breeding down means loss and retrogression.

Some Thoughts for Maritime Potato Growers.

President Brown, of the New York Central, told the Cornell University farmers recently that the average acre yield of potatoes in Maine, mostly on recently forested land, is 225 bushels, against 82 bushels in New York. A more startling proof of soil exhaustion could scarcely be offered.

Unfortunately, the "World" did not give the reply of the "Cornell farmers" to this observation of the great railroad magnate. Readers of agricultural reports and persons conversant with agricultural matters in general, know what such "soil exhaustion" means and how readily such a condition of the land can be remedied. They are aware that progressive and up to-date methods of intensive farming are practiced by many farmers in the Pine Tree State. Their sandy soil, whether recently forested or otherwise, would not yield them a comfortable living, if they did not feed it and cultivate it in the way they do. They have learned long ago that "Nothing from nothing leaves nothing." They also know that plants, like all other living matter, have to feed in order to keep on living and growing and bearing fruit, and that they have to find the food they need in the soil. Where sufficient amounts of plant food, in readily available form and in proper proportions, are not within the reach of the feeding rootlets, the plant starves, wilts, dies; there is no crop.

The intelligent farmer, therefore, take good care to put into his soil all the plant food the crop needs, and cultivates his ground until it is in such a shape that the tender feeding rootfibres can easily spread through it in search of the plant food elements, find plenty of what they are looking for and absorb it, and grow and thrive in proportion. These plant food elements are: Nitrogen, phosphoric acid and potash, which, in a sense, are as essential to the plant organism as water, oats and hay are to the horse. As the horse needs these three essentials to maintain his strength, and as he would perish if one or the other of them would be withheld, no matter how bountifully the remaining ones were supplied, so the plant needs nitrogen, phosphoric acid and potash, and these elements the farmer supplies to his crop in commercial fertilizers. They are also contained in barnyard manure, but not in well balanced proportions; hence the exclusive use of stable manure cannot replace all the elements, nor the total quantity of plant food taken from the land with the crop.

Cultivated crops require varying amounts of each element. Potatoes, for instance, are voracious feeders of potash. The fertilizer applied by Maine farmers to their potato fields contains as much as ten, and even more per cent. of this element. Other crops need more phosphate; still others must have an abundance of nitrogen. Herein lies the explanation of the fact that the land becomes more quickly exhausted, where only one crop is grown year after year on the same land; while an intelligent rotation of crops assists materially in maintaining the fertility of the soil.

Therefore, if the Maine farmers reap greater harvests than the New York farmers, it would indicate that the Maine farmers are more thorough in their work, more liberal in their treatment of the soil. Such a thing as "exhausted soil" should not be tolerated by up-to-date farmers, who have mastered the science of farming and have learned that any kind of arable land, no matter how poor or "exhausted" it may be made to yield rich crops by proper tillage, liberal applications of commercial fertilizers containing potash, phosphoric acid and nitrogen, in proper proportions as required by the soil and the crop, and an intelligent rotation of crops.

Granting these premises, any New York farmer can do as well, and better, as the farmers in any other State in regard to potatoes or any other crop.—H.E.H. in Maine farmer.

Value of Farm Manure.

Barnyard manure when properly saved and liberally applied is one of the most valuable assets to the farm. It improves the physical condition of the soil by adding humus and thereby greatly increases its water-holding capacity; it adds plant food to the soil; it makes the plant food already stored up in the soil more available; makes the soil warmer and accelerates the action of soil bacteria. While the amount of nitrogen, phosphoric acid and potash is not large, the effect of barnyard manure makes it the most valuable of all fertilizers.

The composition of manure is quite variable, depending upon the kind of animal, the age of the animal, the kind of food eaten and the care of the excreta after it is voided. For example, feeding cotton seed meal, bran, corn and other rich foods, make the nitrogen content higher. In general practice on the farm the droppings from all the animals are collected and thrown into a heap. If the urine is saved we may estimate that a ton of well-kept manure will contain plant food constituents as follows: nitrogen one-half per cent, phosphoric acid one-third per tent. and potash one-half per cent or 10 pounds each of nitrogen and potash, and six and two-third pounds of phosphoric acid. Estimated alone at price of the nitrogen, phosphoric acid and potash, a ton of barnyard manure is valued at about $2.72.

It is estimated that a horse of average weight will consume about 24 pounds of dry matter a day and make about 50 pounds of manure a day. The cow will use ordinarily about 25 pounds of dry matter in her food and void about 95 pounds of manure daily. It is estimated that a sheep that weighs about 125 pounds will produce 5.4 pounds of manure a day. From the above data it is an easy matter to calculate the amount of manure that can be saved on your farm. If the horses are in the harness a portion of the time, and the cows are in the pasture a part of the day, suitable reduction must be made.

A knowledge of what the manure contains is of much importance to the practical farmer, since this information will enable him to apple the manure more intelligently, and when necessary, supplement it with commercial fertilizer. To determine more accurately the amount of plant food in the excrement, it is necessary to consider the composition of the food given to animals. Tables giving both the feeding and fertilizing value of feeds are published by most of the state stations and the Dominion department of agriculture, and are free for the asking. For practical purposes it is safe to say that the dairy cow voids 80 per cent of the fertilizing constitutents of the feed; fatting cattle or hogs 90 per cent. By the manurial value of the bedding material which, also, in most cases, may be found in the bulletins referred to, the plant food may be estimated with considerable exactness. Then the important question is to keep the manure from deteriorating in value after it is voided.

The manure from the horse is regarded as the most valuable, but it is more difficult to keep. It is richer in nitrogen than that of the cow or hog, contains much vegetable matter and consequently it is apt to lose by fermentation. It is especially suitable for hot beds, also for damp, cold soils. Care should be exercised to keep it damp and prevent it from heating and becoming "fire-fanged."

The manure from cows contains more water, less organic matter and less plant food than that of the horse or sheep; nevertheless, it is valuable. It can be kept with less danger of loss and when thoroughly decomposed is highly recommended for the garden.

It is usually found advantageous to mix the excrement from all of the animals on the farm, as it can be better handled and applied to the land more conveniently. The mixture gives more even temperature and makes the plant food elements more nearly balanced.

The Value of Seaweed.

Seaweed is often looked upon as a waste product, but, instead of being of little or no value, it is esteemed by those who have used it as a most valuable manure, either when used by itself or mixed with stable or farmyard stuff. Many seacost gardeners are aware of the utility of seaweed for dressing beds of asparagus, seakale, artichoke, and some other vegetable crops, but they do not seem to know that, moderately used, it has a most beneficial effect upon fruit trees, especially apples and pears, also upon grape vines.

It is true that some market gardeners residing near the seashores go to the trouble of gathering and carting on to their land small quantities of this material, but an immense amount of it is allowed to be lost by being washed back again into the sea, to be covered up with sand, or allowed to rot on the beach and become offensive in many ways. In dry seasons it makes an excellent mulching material, perhaps better even than stable manure, and certainly better than many other things which are used. It is recorded that some land which has been reclaimed from the sea had been converted into a garden which grew excellent vegetables, flowers and fruits. There was a great depth of sandy soil, and this was composed to a great extent of sand and decayed seaweed. It appears to be of more value in light than in heavy soils.

Seaweed varies considerably, some being far too coarse and heavy for the purposes mentioned, unless it has first had time for its partial decomposition. Preference is given to that of a finer and lighter character, which, when collected, generally contains a fair amount of sand, making it more suitable in every way for use in the garden, whether it be for asparagus, fruit trees, or even as a plunging material for pot plants during the summer months. We have no statistics available respecting the comparative value of seaweed with farmyard or artificial manures, and, as before stated, the value of the various kinds of seaweed must differ a little.

When burnt, and the ashes applied to the ground, it is good for all kinds of cereals. Seaweed is sometimes suffered to ferment before it is used, but this process is by some thought unnecessary, for there is no fibrous matter rendered soluable in the process, and a part of the manure is lost. A common plan is to mix it with stable manure, and let it lie for a while before using. The best results are generally obtained when used as fresh as it can be got. Some seaweed, which had been fermented, so as to have lost about half its weight, afforded less than one-twelfth of mucilaginous matter, from which it may be fairly concluded that some of this substance is lost in fermentation. The benefits of seaweed do not extend beyond one or, at the most, two years.

Injury to Crops by Freezing and Heaving of the Soil.

Reports from several localities indicate that winter wheat, other winter grain, alfalfa and other crops are being injured by the freezing and heaving of the soil, This heaving results from the alternate freezing and thawing of very wet ground. Certain types of soil which contain considerable clay and hold water are more subject to heaving. Often the whole furrow slice is lifted, doubtless due to the fact that the water tends to accumulate at the bottom of the mellow soil and freezing lifts the soil above; also the cleavage line may be nearer the surface. The lifting of the soil by freezing breaks the roots of the wheat and other plants which may be growing on such land. When the soil thaws it tends to settle, leaving the upper parts of the plant roots exposed above the ground, and the continued alternate freezing and thawing gradurlly draws the plant roots out of the soil.

As long as the ground is very wet and the alternate freezing and thawing continues, nothing can be done to stop the heaving. As soon as the frost goes out and the ground becomes dry enough some benefit may result from rolling—by settling the soil and pressing the soil more firmly about the loosened roots. A heavy, smooth roller is preferred for this work. It is not advisable to harrow wheat which has been injured by heaving, since the harrowing is likely to pull out many of the plants and still further loosen the roots of those which remain.

It is almost impossible to prevent injury by heaving in certain heavy, waxy types of soil. Well-drained land is not thus affected, and even in ground which is subject to heaving it may be largely prevented by good surface drainage and veay careful preparation of the seed-bed. The seed-bed which is prepared late and left in a loose, mellow condition, especially if some trash of manure has been plowed under, is much more apt to heave than the finely pulverized, well-settled seed-bed. If the plowing precedes the planting by a long intervale, so that the soil becomes settled and a good union is established between the furrow slice and the subsoil, than the heaving is much less apt to occur.

It has been shown by the experiments at this Station that the careful preparation of the seed-bed by early plowing and sufficient surface cultivation so as to pulverize and settle the soil results in largely increased yields. It is doubtful whether the injury by heaving to wheat or other grain, which is now occurring in some fields in certain localities in the State, can be prevented or remedied to any extent. Timely rolling may help a little as suggested above. But this damage to the crops may be a lesson to the farmers so that they may in future plantings take greater precaution in putting the soil in the best possible seed-bed condition before planting the crop.—A. M. TENEYCK, Agronomist, Kansas State Experimental Station.

The Swarms of Bees Act.

The following act respecting the right of of property in swarms of bees has become law.

1. This act may be cited as "The Swarms of Bees act."

2. Bees living in a state of freedom shall be the property of the person discovering them, whether he is or is not the proprietor of the land on which they have established themselves.

3. Bees reared and kept in hives shall be private property.

4. (1) When a swarm of bees leaves a hive, the owner may reclaim them, so long as he can prove his right of property therein, and shall be entitled to take possession of them at any place on which the swarm settles, even if such place be on the land of another person, but the owner shall notify the proprietor of such land beforehand and compensate him for all damages.

(2) If a swarm settles in a hive which is already occupied, the owner of such swarm shall lose all right of property therein.

5. An unpursued swarm which lodges on any property, without settling thereon, may be secured by the first comer, unless the proprietor of the land objects.

6. If the owner of a swarm declines to follow the swarm, and another person undertakes the pursuit, such other person shall be substituted in the rights of the owner, and every swarm which is not followed shall become the property of the proprietor of the land on which it settles, without regard to the place from which it has come.

HORTICULTURE

The Use of Bordeaux Mixture.

Some important things about the use of Bordeaux mixture have been determined through experiments conducted by the Illinois Agricultural Experiment station and recorded in bulletin No. 155. A few of them are :

1. Injury to foliage of apple trees following application of Bordeaux mixture is of common occurrence. Much of the injury reported or observed is preventable. The principal sources of injury as determined by observation are :—(1) Use of impure or improper materials. (2) Carelessness in making the mixtures. (3) Improper and ineffective application.

The first two of these sources of difficulty can be entirely eliminated and the third greatly mitigated by reasonable attention and supervision. Formulas must be respected and small details of practice must receive attention in order to attain best results. But when all precautions have been taken injury sometimes results. These non-preventable injuries are associated with unfortunate weather conditions and particularly with the action of rain and dew.

2. The adhesiveness of Bordeaux mixture depends very much upon the manner of making and upon the character of the lime used. Variation in the proportions of copper sulphate and lime beyond certain well-defined limits decreases adhesiveness. With lime of good quality a close approximation of equal parts of copper sulphate and lime gives greatest adhesiveness There is decided advantage in the maintenance of an excess of lime upon the foliage, but this must be accomplished by subsequent applications and not by increasing the amount in the original mixture.

3. No definite experiments regarding the accumulation of copper in the soil under sprayed trees have been conducted, but from results reported of experiments of others it does not appear that there is danger from this source. There is no evidence at hand that in any way associates browning or yellowing of foliage with copper in the soil.

4. The two classes of leaf injury considered are, "brown-spotting" and "yellowing." Brown-spotting is the more common injury. Yellowing, when it appears in epidemic form is the more serious of the two because affected leaves are entirely destroyed. Not all brown-spotting is due to spraying. Other causes are, frosts, winds accompanying cold spring storms, fungi and insects. Leaf injuries are most common and most serious in neglected orchards.

5. The ideal spray compound that is perfectly effective and at the same time perfectly harmless, on all occasions and under all conditions has not yet been discovered. Bordeaux mixture most nearly approimates the ideal, but its harmlessness can not be absolutely depended upon.

6. Injuries to foliage do sometimes follow applications of Bordeaux mixture and appear to be unavoidable. There are differences of opinion as to the exact manner in which injuries are inflicted.

7. The value of Bordeaux mixture as a fungicide depends upon the contained copper. The action is preventive and not curative. It follows that early application with the one aim of defence gives infinitely better results than later application intended to check ravages already begun.

8. The causes of yellowing of leaves of apple trees are obscure and not well understood. From observation extending over five seasons it seems certain that there are several causes which may operate singly, or together. Recurrent epidemics of yellowing appear to leave no direct relation to wet or dry periods, or to other weather conditions. The experiments made do not establish any direct and positive connection between spraying with well made Bordeaux mixture and yellowing of leaves, but do show that improperly made mixtures may cause yellowing results from use of simple solutions of copper sulphate.

9. Healthy bark of apple trees is impermeable to Bordeaux mixture and solutions are absorbed through wounds and promptly kill the leaves which then become brown. Numerous experiments in which copper sulphate and solutions were injected through roots and through holes bored in trunks of trees, uniformly resulted in browning of leaves. The copper penetrates to the leaves as was determined by analysis.

10. The importance of rain and dew as agents causing brown-spotting of foliage following applications of Bordeaux mixture is well attested by the uniform results obtained from the experiments with covered and uncovered trees. Two trees were sprayed heavily; one was left exposed, the other was prtected from all rain and dew. This was repeated during three seasons. In each year the foliage of the exposed tree was more or less injured by brown spots, while the tree protected from rain remained free from injury. Several other experiments in which trees exposed to rain were brought into contrast with trees protected from rain gave, in all cases, the same results, namely, some degree of injury to foliage exposed to rain and absolute freedom from injury to the foliage of trees protected from rain.

11. Milk of lime does not cause brown spots even when applied in large quantity, but burning quickly follows applications of copper sulphate solutions even when the solutions are very dilute. It is therefore concluded that copper in solution is the active agent responsible for the burning of foliage.

12. Bordeaux mixture has a decided influence upon the color of leaves. Under a coating of Bordeaux mixture leaves assume a very dark green color that is retained even after the coating is mostly washed away. Leaves coated with lime only become in some degree darker in color than untreated leaves, but the shade is not so deep as is assumed under a coating of Bordeaux mixture.

Money in Strawberries.

"My strawberries have yielded me $300 an acre for the last four years, but as I have only four acres there is no danger in my making a fortune."

The speaker was a woman who owns a small farm within twenty-eight miles of New York city which she works and manages according to her own ideas. While her berries and vegetables are always up to the standard she makes no pretence that they are the best in the market or that she receives more than the regular market prices for them.

"In the first place," she went on, I believe that the land for strawberries should be as carefully prepared as that for the tenderest vegetables. After my land has been properly prepared and fertilized I make rows for strawberries about three and a half feet apart in the row. This, I believe, is called the single plant system among marketmen.

"The runners are placed from four to six inches apart in the rows and all other runners are kept cut off during the season. This is not as cheap a method as the matted row system, but it will insure finer berries, and I have found that in the long run it more than pays for the added expense in time and money.

"One thousand pounds of good fertilizer is not too much for an acre of strawberries, and I ordinarily use about that amount. Of course the land has to be tested to find out just what fertilizer is required for growing berries. One of the mistakes commonest among growers of small fruits and vegetables is thinking that the same fertilizers should always be used for the same crops.

"My favorite varieties are the Marshall and the Gladys. I have made as much as $103 from a single picking of Marshalls from one acre of ground.

"One of the problems of raising strawberries in this climate is protecting the plants during the winter. I have used both a mulch of straw and one of coarse horse manure. While the manure has the advantage of giving additional fertilizer to the plants during the fruiting season I think I rather prefer to add manure in some other way and keep the straw for mulching.

"The gross earnings of my strawberry patch are about $500 an acre. The cost of producing and marketing the crop is in the neighborhood of $200 an acre, which leaves me a clear profit of a little more than $300 an acre. I have two neighbors who make a larger profit on their berries, but on the other hand I also have several who make considerable less.

"I consider my farm a good investment because it earns me a good living for the time and money expended. If it was a man's farm I don't believe it would be considered remarkable, but because I am a woman and prefer to have things my own way people ride miles to see it and ask about my experience.

"It is my experience that no small fruit crop pays as well near a large city as strawberries under favorable conditions. What I would call unfavorable conditions would be severe drouth, the presence of the white grub and the rust, or leaf blight. Any of these cut off a crop of berries below the profit margin, if it did not destroy it.

"I have on two occasions had a slight taste of the white grub, which is often very destructive. Also I have had leaf blight appear in my strawberry patch, though it did not gain any considerable headway and ultimately the damage was slight. I used the same remedies with success that I have seen used by other berry growers with almost no effect. The reason these methods proved successful in my patch according to my belief is the perfect condition of the plants. It is my effort to keep each berry plant in my patch as vigorous and in as perfect condition as if the profits of my farm were dependent on it alone. In plant life as in animal life if you want to fend off disease you must keep up the individual vitality.—New York "Sun."

Spraying Demonstrations in Apple Orchards.

The Nebraska Agricultural Experiment Station has just issued Bulletin No. 98, entitled "Spraying Demonstrations in Nebraska Apple Orchards." The bulletin gives the results secured from the spraying demonstrations carried on last year in six counties of southeastern Nebraska by the Nebraska experiment Station and the U. S. Department of Agriculture. The cost of spraying and the value of sprayed and unsprayed fruit are reported in detail. The bulletin may be had free of cost by residents of Nebraska. Those who desire it should address the Agricultural Experiment Station, Lincoln, Nebraska.

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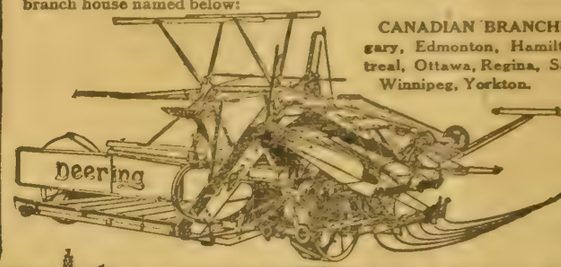

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In 1906 spraying demonstrations were conducted in six apple orchards, one in each of six counties of southeastern Nebraska Agricultural Experimental Station, the United States Department of Agriculture, and the owners of the orchards. The objects were to demonstrate the value of spraying in controlling apple scab and codling-moth, to determine the cost of spraying, and to learn whether it pays to spray apples under the conditions existing in Nebraska.

In each of the orchards a part of the trees were sprayed and a part left unsprayed for comparison. One of the orchards was sprayed four times and the other five times. The spray material was Bordeaux mixture containing some poison, Paris green, arsenate of lead, etc.

An accurate account was kept of the quantity and the cost of the spraying materials used and of the time and cost of applying the spray. Extensive observations were made as to the percentages of wormy and scabby fruits on sprayed and unsprayed trees. An exact record was made of the yield of fruit of a part of the trees of the sprayed and of the unsprayed blocks of each orchard. The selling price of the fruit was also determined as nearly as possible in every case.

The total quantity of material used per tree for the five sprayings varied from 5 to 15 gallons, averaging nearly 11 gallons, or a little over two gallons per tree for each application. The material cost from a trifle less than one cent to nearly one and a half cents per galllon, averaging one cent per gallon. The cost of applying the spray was from six-tenths of a cent per gallon where power sprayers were used, and about one and a half cents per gallon where hand spray pumps were used, averaging a trifle over a cent a gallon. The total cost of both material and labor for spraying 2,175 trees five times was only a little over 21 cents per tree, the trees averaging about eighteen years old. The cost varied from 12 cents to 33 cents per tree, depending upon the age of the tree, the conveniencies for mixing materials the kinds of pumps used, and the like. The average cost was a little over four cents per tree for each spraying.

Records made at the end of the season from the entire crops of 37 sprayed trees and 39 unsprayed ones in the different orchards, including observations on over 110,000 fruits, showed 22 per cent. of wormy apples on sprayed trees and 46 per cent on unsprayed ones. Of the sprayed fruits 6 per cent and of the unspraped fruits 38 per cent were scabby.

During the fall the foliage of the sprayed trees was much healthier than that of the unsprayed ones. In many cases, from 50 per cent to 75 per cent of the foliage of the unsprayed trees was on the ground early in October and in some instances the trees were almost defoliated at that time. Moreover, the leaves that remained on the unsprayed tress were entirely killed by the frosts of early October. At the same time the leaves of the sprayed trees were bright green, comparatively free from fungus diseases, and almost perfectly free from frost injury, and very few had fallen to the ground.

The entire crop of fruit from 205 sprayed trees and 71 unsprayed ones in the different orchards was gathered and classified into "merchantable fruit," "culls" and "windfalls." The merchantable fruit was such as the owners were able to market in the ordinary ways, and the culls and windfalls were such as were fit only for vinegar factories and the like. The average yield of the sprayed trees was 8.4 bushels per tree, and of the unsprayed trees 6.6 bushels per tree. The smaller yield of the unsprayed trees was due in part to the smaller size of the individual fruits and in part probably to the dropping of many fruits early in the season. The culls amounted to 8 per cent. of the total crop of sprayed fruit and to 23 per cent. in case of the unsprayed fruit. The windfalls, likewise, were 17 per cent. and 34 per cent. for sprayed and unsprayed fruit, respectively. The total value for the unsprayed fruit averaged 80 cents per tree, while for the sprayed trees the average value was $1.87. Subtracting from the latter the average cost of spraying, 21 cents per tree, there remains a net value of $1.66 per tree for the sprayed fruit, against 80 cents per tree for the unsprayed fruit, or a direct gain from spraying of 86 cents per tree. On land worth $100 per acre, the unsprayed fruit produced an average return of about $40 per acre above the cost of harvesting, and the sprayed fruit on the same land gave an average return of over $80 per acre above the cost of harvesting and of spraying. If it pays to grow apples at all, it pays to spray them !

The bulletin gives the following recommendations for spraying this year, based upon the results obtained last year :

(1) Spray with Bordeaux mixture after the cluster buds open, but before the individual flower buds open.

(2) Spray with Bordeaux and some poison, such as arsenate of lead, Paris green, etc., as soon as possible after the blossoms fall, and at any rate before the calyx lobes of the apple close.

(3) Spray with Bordeaux and poison three or four weeks after the flowers fall.

(4) Spray with arsenate of lead about July 20th.

(5) Spray with arsenate of lead about August 10th.

Use Paris green at the rate of one-fourth to one-third pound per barrel of Bordeaux. Use arsenate of lead at the rate of two pounds per barrel of Bordeaux or water.

Make Bordeaux as follows :

Bluestone	4 pounds
Quicklime	6 pounds
Water	50 gallons

Slake the lime, dissolve the bluestone, dilute each with half the required quantity of water, and mix thoroughly.

Use good nozzles and maintain a high pressure as uniformly as possible in order to distribute the liquid in a mist-like spray. Take care to reach all parts of the trees and to avoid drenching any part. Careless spraying should not be tolerated.—R. A. EMERSON, Nebraska Experiment Station.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Bonusing the Dairy Cow.

Editor Maritime Farmer:—

I was pleased to see a correspondent's further comment on the bonus question for dairy cattle.

I refer to the letter from my friend Mr. Peters, in your last issue.

I am going to ask you for space in this issue, for fear any of your readers should notice the amount of money which my friend Mr. Peters, seems to be under the impression I stated would be required as its first item, namely, three hundred thousand dollars.

This amount would perhaps be a paralizer. What I did say was that it would require, under the estimate I made up, from $30,000 to $40,000 to try it for one year.

This estimate was made up as follows: In order to give each county a chance simultaneously, would require fifteen Inspectors, one for each county. ...

These I estimated at $1000 each $15000.00

I further estimated that these fifteen could inspect or check up in the neighborhood of 500 cows for two milkings once each month (this would vary according to the distances apart the herds entering would be). This would make 7500 cattle available to compete for Bonus and in order to be prepared that all would succeed in making 4000 lbs. milk and 160 lbs Butter Fat and the Bonus says 300 per cow would leave the Dept. open to have to furnish.....$22500.00

Or a total of..... $37500.00

To which might be added some incidental expenses say 2500.00

Or a grand total of $40000.00

It is not, however, to be expected that all, those entering will be successful and make the required amount, but of course the Department would have to be prepared Then your readers will understand the amount required to qualify is to be raised each year 1000 lbs., that is, if the scheme proved workable and productive of good results it would be carried on for five years, making 5000 lbs. the minimum the 2nd year, 6000 the 3rd year, 7000 the 4th year, and 8000 the 5th year.

My own opinion is, the amount to be paid bonus each year would rapidly grow less as the amount required to qualify increased, so that the Bonus money would not necessarily grow excessively burdensome and yet the result required would be attained, namely ascertaining the productive value of your cow machine.

Now it is quite true that this weighing should be done without this incentive but the fact remains that it is not done in one case in ten, and yet the Department and Institute speakers have been preaching it for years and years, and instead they are leaving the dairy and going at the wheat and I am strongly of the opinion that nothing short of the Bonus dollar will wake the majority up to the fact that they must know what the machine is doing if they are to continue putting the costly feed of today into that machine.

I am quite willing to admit that it is some trouble and expense to weigh, especially at 5 a. m. fo a winter's morning, with a half blackened lantern globe as the only light and one's own eyes about half opened and perhaps in the spring of the year you have been up half the night looking after a new calf—or staying by the ewe with her new lamb, etc., and yet to accomplish the desired result today you must introduce and keep up some business methods in order to keep in the competition at all, as one cannot farm today and meet competition under the same system as our forefathers or our old veteran friend, Donald Innis, did.

Because where Donald, 30 years ago could get along with a scythe @ 60c, we must have a mower @ $60.00, and where he had a hand rake at 25c, we must have a horse rake at $25.00, and so on, or if we don't its the Sheriff that would be knocking at the door instead of Donald's Woodpecker.

I myself started out to make a living from the dairy cow, some 27 or 28 years ago, but like a good many

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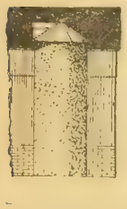

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more I got discouraged, because having a very limited capital I did not seem to get ahead and finally drifted away from it and found it easier to make a profit in other lines. I thought at that time the trouble was with the country itself, after seeing other countries I found out there was nothing much wrong with this country and after some more years of investigation I am satisfied the dairyman's greatest trouble is in the lack of knowledge of his production, and the fact that he is only producing with two machines about as much as he should produce with one. This can only be verified by careful weighing and testing year after year—breeding only those which are producing paying quantities and weeding out those which are not.

Think what this expenditure of $40,000 would do. It would produce a definite knowledge of what 7,500 animals, at least were doing.

It would encourage at least 700 or 800 dairymen each year to a larger and heavier production with practically no more cost. If the money were spent, it would all be spent within the country and return to every business interest in the country. It would enable the wholesale distributor of the product to reach out and get a foreign connection to export to, inasmuch as he would feel safe that the production was going to keep up at least for 5 years, and right here is one of the dairyman's hardest set backs, for after all this is only a very narrow and limited market here in New Brunswick, because our buyers after all can only handle a very limited volumn of trade and while it is true that they have to go outside today for some dairy and hog products and consequently pay a high price, yet when we all get to producing on those lines it does not take long for our limited market to get overstocked and the price to tumble down, along with which tumble comes the discouragement to the producer.

One cannot perhaps blame the wholesaler, for in the past if he should attempt to start for an export connection the very next season he is confronted with a shortage and he is unable to make sales.

If on the other hand, he was assured of a continuous increase so he could make his foreign connection, or export trade. He ought then in his own interests to keep up a fair market price, knowing that he would be able to sell and increase.

It is in this direction that we are different from our neighbors in the Upper Provinces inasmuch as they have a much larger more expansive market and buyers than we in this smaller market.

I myself, have seen pork, for instance, which is part and parcel of the dairying, in the St. John market start, say, at 9c in the fall and before the River navigation close go down to 5c, simply because the buyers quickly got all they could handle, or apparently so.

So far as the need of this Bonus or encouragement is concerned, I think all will agree, especially when you stop to see the way our ranks are being depleted and the farms abandoned of stock raising and the rush to the wheat fields. In many parts of this, the Banner County of Kings, so called, it is going on to an alarming extent, and mind you the Dominion Government is practically bonusing them to go by giving them 160 acres of workable land that with willing hands and a pair of horses will produce a profitable crop in one year's time.

Do your readers and our representatives in the Government know and realize that our dairy production through the creameries has decreased over 2,000,000 lbs. of butter from what it was two years ago.

Think of what that means?

Some day you'll own an Empire Separator

No matter what make of separator you may own at present—no matter what make you may buy this year—sooner or later you'll get an Empire. The sooner that day arrives the quicker you'll know what a really good separator will do. Judge the Empire from what it has done for others. It will do the same for you.

Empire Cream Separator Co., Sussex, N. B.
Gentlemen:—I have used an Empire Cream Separator for over three years without it costing me a cent for repairs in that time. It runs so easily my little boy six years old thinks it great fun to be allowed to turn it. It is a close skimmer, easily washed, and a marvel of simplicity.
Annapolis Royal. (Signed) H. Dwight Ruggles.

Empire Cream Separator Co., Toronto, Ont.
Gentlemen:—Ten years ago I bought a No. 5 Empire separator in Montreal from your agent in that place and have used it ever since. The cost during the ten years for repairs, aside from an occasional rubber ring, was 25c for a new point in the end of the spindle.
Hemingford, Que. (Signed) Archie Cleland.

Empire Cream Separator Co., Toronto, Ont.
Gentlemen:—Eight years ago last spring I purchased one of your No. 5 Empire Cream Separators and during those eight years we have run it continuously without spending a cent for repairs, aside from a few rubber rings. We are using the separator today, and it does as good work as ever.
Rougemount. (Signed) James Standish.

Empire Cream Separator Co., Toronto, Ont.
Gentlemen:—The 325 pound per hour separator I got from you nine years ago has given perfect satisfaction. I have kept 15 cows on an average. It has not cost me one cent for repairs in that time, and is in good running order today.
Rocklyn, Ont. (Signed) Samuel Gilmour.

Empire Cream Separator Co., Toronto, Ont.
Gentlemen:—After a thorough test of the Empire Separator, I found it to be a first class machine, working well under all conditions. Will make the best job of milk when it is cold of any machine I have seen. • • •
Cobourg, Ont. (Signed) J. F. McMillan,
Supt. House of Refuge.

Empire Cream Separator Co., Toronto, Ont.
Gentlemen:—Having purchased one of your separators over seven years ago, I have much pleasure in recommending it. Have used the separator continually during the seven years, and it has not cost me one cent for repairs.
Whalen, Ont. (Signed) Mark McGee,

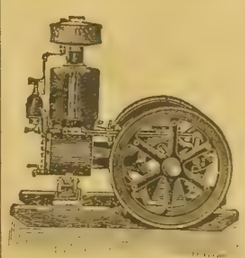
There is an Empire dealer in almost every town in Canada. If there isn't one in your town write us direct for special offer.

25c Book Free

Provided you tell us the number of cows you keep, also name of this paper, we will send you one copy free of our new 25c book which tells the truth about cone and disc methods of cream separation. Ask for book No. 46 Send for it immediately. Extra copies 25c. 4

THE EMPIRE CREAM SEPARATOR COMPANY OF CANADA, LTD.
Sussex, N. B. TORONTO, ONT. Winnipeg, Man.

DO YOU WANT
The Simplest
Gasoline Engine?
Look at the cut



The 'Stickney'

is known from the Atlantic to the Pacific because it is the farmers favorite. **So Simple.**

No Pipes and Separate Tank always in the way.

Strong and Heavy—Means hard work.

Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

WINDMILLS, GRINDERS, TANKS, PUMPS, Etc.

Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.

G. J. Barrett { Sales Agent } 32 Dock St. St. John, N. B. Branch at Fredericton, N. B.

MOLASSINE MEAL
is an APPETISER—A DIGESTER and a proved WORM ERADICATOR.
A food for all Horses, Cattle, Sheep, Pigs and Poultry.

—SOLE IMPORTER—

Andrew Watson.
01 Youville Square, - MONTREAL.

Put the Joke on Him

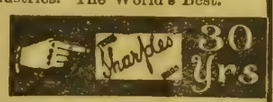
If any one tells you that disks are ne essary in a mo.ern cream separator, put the joke on him. Ask him why traction engines and automobiles need no horses. He'll say, "Because they have got power enough without horses."

Then tell him that Sharples Dairy Tubular Cream Separators need no disks because they produce skimming force enough without them—that Dairy Tubulars have no "fillings" yet produce twice the skimming force, skim faster, skim several times cleaner and last longer than common machines.

Full pan shows disks from common separator. Other pan shows the only piece used inside Sharples Dairy Tubular Bowls.

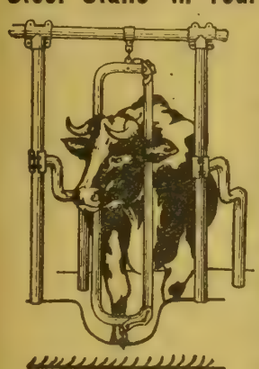
Tubular sales easily exceed most, if not all, others combined. Tubulars probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries. The World's Best.

Write for Catalog No. 194



THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

Why Not Put 'BT' Stanchions and Steel Stalls in Your Stable ?



They will make it brighter and neater, are stronger, more durable and cost less than any other kind of stable when all is considered. With them your cows will be kept clean and comfortable.

Write for our new catalogue which tells why it pays to use "BT" Stanchions and Steel Stals.

BEATTY BROS., Fergus, Can.
Hay Carriers, Litter Carriers etc.

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SAVE MONEY

The Best Ever

issued: Guns, Rifles, Ammunition, Fishing, Tackle, Baseball, Golf, Tennis, Lacrosse, Camping Outfits, all Summer and Winter Sports. We want

Every Man

who Hunts, Fishes, or plays any Outdoor Game to get our large free Catalogue. Prices right, satisfaction guaranteed. Immense stock, prompt shipment

You save money by getting Catalogue to-day.

T. W. Boyd & Son,
27 Notre Dame St. West, Montreal

Some of it may perhaps be accounted for by being made at home on the farm, but still it ought to be increasing both on the farm and in the creamery.

Twenty years ago Denmark was exporting $7,000,000 worth of butter, while last year she exported $45,000,000.

Incidentally I might mention that the same increase is visible in all her farm products, brought about principally from the fact that she maintains almost a thorough agricultural policy, and there are at the present time some 24 members of its government who are practical farmers, who know what they want and who assist the agriculturist in every possible way.

The possibilities of this dairy industry in the Province of New Brunswick are enormous, if it is once put on a profit producing basis. We can raise crops here equal to any part of Canada, unless it may be one or two grain crops. What we need is to get our own people on their feet.

The time is coming when the West will look to the East for dairy cattle, in fact I have the proof of this on my table before me now in an enquiry for a carload of Ayrshires for Wyoming (this comes in response to my ad in your excellent paper, and reaches me only about one week after the paper was issued). They go on to state that they shall have to look to the East for dairy stock. This will no doubt be much truer as time goes on, for with so many cutting out the live stock and going into the wheat raising, it will not be long before their soil will become depleted and the wheat market eventually overstocked, because in cutting off the live stock they are cutting down one of their heaviest customers for grain and grain products and will surely eventually drive their own market price down. Already I read of a large percentage of last year's grain being held by the farmers themselves. Let us then get some stimulation from this bonus. Get our herds in better shape and be ready for stocking up our old neighbors when they come East for some good milkers, by that time we will have records to show them of just what profit producers we have.

I already have many converts to this idea and will be glad to hear through your columns of many more and if we stand shoulder to shoulder it will surely come, for after all our representatives are only elected to carry out our wishes, and it is surely the farmers turn for something now. He has been patted on the back long enough—told he is the backbone of the country—made to pay his share of the taxes which in the end, pays the subsidy for new railways. Pays the subsidy for new steamship lines. Guarantees the interest on cold storage warehouses for the capitalist. Pays the bonus on the steel making. Pays the bonus on the iron production. Pays the bounty to the fisherman and other items too numerous to mention.

Now let us have a turn and have a bonus on the dairy cow production.

I am no politician and do not know the ways and means required to raise the amount but I say if it can be done for every other industry the way can be found to do it for this, when in the words of Chancellor Jones, of the U. N. B. say:

Fish in N. B. is worth.....$6,000,000
Lumber in N. B. is worth 7,000,000
Agriculture is worth..... 20,000,000

Add to this the fact that our specially appointed commission honestly report a decline in almost every branch of the business, in every section they visited and I think you have all the good necessary to demand a radical change of some sort.

In order that all your readers may have an intelligent idea of the

Steady as a Rock.

The Square Gear

MAGNET CREAM SEPARATOR

Skims perfectly setting on the ground or floor

The double supported bowl cannot wobble.

At our expense you can study MAGNGT construction in your own Dairy.

You will find its frame strong and rigid.

It is run by square gears and you know that all good machines are built that way.

Its steel bowl is supported at both ends (MAGNET Patent.)

All other separator bowls have only one end steadied.

The skimmer in one piece, (easily cleaned) takes out all the butter fat and also separates the slime and foreign matter.

The MAGNET Cream Separator delivers good thick cream every day.

The MAGNET Brake circles the bowl, stops it in eight seconds, preventing wear and saves time.

The MAGNET owner can increase the capacity when he gets more cows for a few dollars, by changing bowls and skimmer only.

No matter what cream separator a man experiments with or buys, he will finally settle down to the MAGNET and when he does his separator troubles are at an end.

Why not buy a MAGNET at first and avoid trouble?

The MAGNET is fifty years away from the scrap heap.

The Petrie Manufacturing Co., Limited,
Head Office and Factory—**HAMILTON, Ontario, Can.**
Branches—Winnipeg, St. John, N. B., Regina, Hamilton, Vancouver, Calgary, Montreal.

It is No Longer a Question Does a Separator Pay?

THE QUESTION IS—

What Kind Shall I Buy ?

Drop a postal to our nearest branch office and get THE CAPITAL book. It tells you some FACTS worth knowing about separators—how THE EASY RUNNING CAPITAL wil "BUY ITSELF" for you—THERE'S THE ANSWER—

The Capital Separator

with it's close skimming, "easy to wash" bowl, weighing less than four pounds, gets you all the cream.

We Save Years With Our Gears.

The National Mfg. Co., Limited,

OTTAWA, Ont. REGINA, Sask. EDMONTON, Alta. MONCTON, N. B.

Bickmore's GALL CURE

Be sure and work the horse

The soothing, healing ointment works a speedy cure of *Galls, Cuts, Sores and Wounds.* Standard horse remedy of the world. Cures while you work the horse. Buy it and be ready for emergencies. Sold by dealers generally. Trial sample sent for 2c. postage. Get it and test it. Address

Wingate Chemical Company, Ltd.,
811 Notre Dame St. W., Montreal, Can.

proposed bonus I submit details as follows:

That a sum not exceeding $15,000. be granted for the remuneration of fifteen inspectors, one for each county, whose duty it shall be to visit each herd that may enter for the bonus, once each month during the year, there to inspect the weighing of each cows milk that is entered in the test, both night and morning. Also to test the milk for butter fat. That said inspector shall be a capable practical man, expert enough to give instruction and advice regarding breeding, feeds, and feeding when called upon to do so.

He shall also be required to take an accurate census while passing through the county of the live stock, crops and any other statistics that may be required. That a further sum, not exceeding $25,000, be granted for the purpose of paying a bonus of $3.00 per cow to all cows qualifying for the following production, each year.

1st year all making not less than 4000 lbs. milk or 160 lbs. butter fat.
2nd year all making not less than 5000 lbs. milk or 200 lbs. butter fat.
3rd year all making not less than 6000 lbs. milk or 240 lbs. butter fat.
4th year all making not less than 7000 lbs. milk or 280 lbs. butter fat.
5th year all making not less than 80000 lbs. milk or 320 lbs butter fat.

That this plan be put into effect for one year first as a trial and if found unproductive of good results, that it be continued for four years longer, or five years in all.

This in brief is the scheme as outlined. The amount required is a mere bagatelle if it will put the industry on its feet for there are over 6000 people directly and indirectly interested in this line in the Province of N. B., and I believe I am within the mark in stating that at least 75 per cent. are discouraged today and I further believe it is because they do not realize that they are feeding two to get the same result they should get from one.

At the end of five years, those entering for bonus would know just where they stood, would know just what their machines were earning and whether they could afford to keep them or not. The machines that were producing would have some value.

At present the average cow changes hands at about $30 to $35, the buyer has nothing to go by except his judgment, and that is often like telling a horse's age after the marks has gone off his teeth.

He will invariably be told "she will fill a pail" but he forgets the long time she goes without filling a pail.

Prof. Cummings says the average production in the Maritime Provinces is 3000 lbs., that would make on an average 120 lbs. of butter fat worth an average of $30 for a year, while she will cost in feed alone that much money.

Is it any wonder that the majority are discouraged.

Can anyone afford to sell any kind of a dairy cow for $30.00.

Supposing she drops her first calf and begins to produce at 2½ years old. He would have to feed and care for her for at least 2 winters of 8 months each or 16 months in all, that would be 480 days and if it was only worth 5 cents per day including feed she would cost $28.00 before she began to produce, and it ought to be worth that much to tend her twice a day to say nothing of feed.

Before closing I also want to remark regarding the letter in your last issue re Help and Scotchman.

I do not believe it is half as hard to get help on the farm, as it is to pay them from profit off the farm, when you do get them. I also believe many of our own Province men are fully as good help as the imported, though it is true they ask more wages than an immigrant who is landed here with only enough money left to get to his destination, and if our farmers here only had as much profit from their dairy herds as the wheat producers in the West have from their wheat they also could afford to pay them those wages and then our own boys would be staying with us.

I have been an employer of labor for 18 years and I still have with me the first man I hired and every one in my employ today is a Blue Nose and most of them born and brought up in New Brunswick.

Now, Mr. Editor, I realize I am taking up a lot of valuable space, and I will merely say in closing, in case anyone should think me a pessimist, that every dollar I own (and it is true that is not many) is invested in the Maritime Provinces, some of them in dairy stock and some in a butter factory. This is my home, and I doubt not, always will be, and therefore, believing as I do that agriculture is truly our largest natural asset, I say, "let it be developed."

Let us hear from all, both for and against, because if the idea is right, it needs all your support, if the idea is wrong, point out its weak points.

Yours truly,
E. A. SCHOFIELD.

P. S.—I might add that I fully believe the Dominion Government might well assist our own local government in some such scheme as this bonus, because I have read in the estimate passed at Ottawa this year of $165,000 passed for experimental farms. How much does N. B. get of that?

$100,000 passed for the development of dairy and fruit industry. Can we not come in for part?

Many Cases of White Plague Conquered by Butter Fat

Man for many centuries has been looking for something that will cure tuberculosis, but it is only recently that science has been able to insert an entering wedge into the mysteries which surround this disease. Fresh air and proper dieting are among the chief factors of treatment of patients affected with tuberculosis, and milk is considered one of the best foods for persons suffering from this malady. The following statements have been made by Dr. B. J. Kendall, Galena, Ill:—

The most certain method ever adopted for the cure of the "Great White Plague" is through the diet used as per directions given below which can be taken at home and comes within the reach of the poor as well as the rich.

The modus operandi is to force the body to take on fat, a desideratum long felt by the medical profession, but never before attained to.

KIDNEY TROUBLES

Are Overcome By

Dr. Morse's Indian Root Pills

The kidneys have a very important work to perform in preserving health. All the blood passes through them over and over again and they filter it, removing all the impurities and worn-out muscle and tissue which the blood gathers up, in microscopic particles, in its flow through the body. These impurities are then expelled through the urinary system.

When the kidneys for any reason fail to perform this function, and the impurities are left in the blood, *about the most distressing series of ailments which afflict mankind follow.* First there is the aching back and a feeling of weariness, and then, as conditions grow worse, comes Rheumatism, Gravel, Diabetes, Gall Stones, Inflammation of the Bladder or the dreaded Bright's Disease.

The man or woman who allows kidney trouble to develop into any of these diseases is doing himself or herself a grave injustice, particularly when a cure can be had so readily. One of the coustituents of **Dr. Morse's Indian Root Pills is** a Diuretic, which strengthens and stimulates the kidneys, enabling them to do their work thoroughly and with ease. These Pills also increase the action of the bowels and the pores of the skin, which remove some of the impurities, thus lightening the work of the kidneys.

Mr. Geo. Whitney, of Buffalo, N.Y., says they worked wonders for him. He writes:

"Your Doctor Morse's Indian Root Pills have worked wonders in my case. I suffered for six years from liver trouble and kidney ailment. If I tried one medicine I tried a dozen, but without good results. Your pills were recommended and they cured me after using four boxes."

Dr. Morse's Indian Root Pills should be taken at the first sign of back-ache, of rheumatism, or of any difficulty in urinating.

DR·MORSE'S INDIAN ROOT PILLS

Cure Sick Kidneys

For Sale Everywhere at 25c. per Box. 22

Anti-Trust Prices Freight Prepaid To You—No Duty
on FARM and TOWN
Telephones and Switchboards

Poles, Wire, Brackets, Insulators, Tools, Lightning Arresters, Ground Rods, Batteries, Insulated Wire, and everything necessary.

NO CHARGE for our experts' letters of advice, drawings, explanations, instructions, telling you in any language non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

We are the **largest**, exclusive and **the only** bona-fide **Independent** Telephone and Switchboard makers in **Canada** or **Great Britain.**

Our Telephones are extensively used in Canada, England, France and by the U. S. Government.

Our great illustrated book on the Telephone **sent Free** to anyone writing us about any new Telephone lines or systems being talked of or organized.

We have a splendid money-making proposition for good agents.

The Dominion Telephone Mfg Co., Ltd. Dept. K. Waterford, Ont., Canada.

FENCE For SALE

4,000 Rods **4-bar 40 inch No. 9 Fence,** stays 22 inches apart In lots to suit, in 40 rod rolls. **Price 23c per rod.** Freight paid east of Fort William. This fence was made up for a foreign customer, who failed just before shipment was made.

Also some bargains in small lots of 7-Bar, 8-Bar and 10-Bar Fences. Particulars on request.

The EMPIRE FENCE EXPORT CO., LTD., Walkerville, Ont.
Good Dealers desired in unoccupied Canadian Territory.

During the last fifteen years I have prescribed this diet in hundreds of instances and where directions have been followed strictly it has raised the weight and increased the strength and vitality of the patient rapidly up to a normal condition, thus enabling nature to assert her sovereign right to be the dominating force in the body and the germs causing consumption have been overcome and the cure accomplished. Some have gained a pound a day and would gradually take on less until they would not increase in weight more.

The all important thing is to drink large quantities of milk strippings (the very last of the milking, which is all cream when a proper cow is selected.) This seems so simple and easy that many have refuseh to follow directions and demand medicine to cure them; but there has not yet been discovered any medicine that is a specific for consumption.

To get best results a healthy cow should be selected, one that does not cough and one that gives very rich milk. The milk should always be tested to be sure that there is a large per cent of fat in it.

The last quart should be milked into a separate dish which rests in a larger vessel containing warm water just sufficient to prevent the strippings from cooling below blood heat. The cow should be thoroughly cleaned to prevent any dirt getting into the milk so the patient can blow back the froth and drink at once without straining as this cools it too much.

Begin by drinking nearly a pint in the morning and the same at night and increase the quantity gradually so that in ten or fifteen days a full quart will be taken twice a day. It should be taken immediately after milking, before it has had time to cool any. All should be taken that can be without too much discomfort and then rest two or three minutes and drink more and rest again and so on until a full quart has been taken as soon as it can be conveniently. In about fifteen minutes the patient should eat at the table such articles of food as are known to agree with the stomach. At noon eat as usual.

When the strippings are not allowed to cool below blood heat and taken immediately after it is milked, a full quart will be transfused into the circulation in a remarkably short time.

I never have seen a case but could take the strippings without any discomfort worth mentioning when above directions were followed strictly, although some have declared they could not before trying it; but when they delayed taking for half an hour and the milk had cooled ten degrees I have seen half a pint make them very sick. The great secret of success with it is in taking it immediately after milking and not allowing it to cool below blood heat, taking a full quart morning and evening and having milk that is very rich.

The following is a typical case: Mrs. A. E. was suddenly startled to find her weight was forty pounds below normal. She was coughing terribly and soon had a very profuse hemorrhage from the lungs that came near taking her life. I at once began the use of the milk strippings after hemorrhage was stopped and in a few days, about ten or fifteen, she had gained nearly a pound a day and was soon able to get out of bed and go around the house. She gained quite rapidly and as her weight and strength increased her cough decreased. When she had gained thirty pounds in about three months her cough left her. I had her continue the same diet for six or eight weeks longer and she gained ten pounds more and then would not take on more flesh. She was then as well as she ever had been and continued well after the strippings were discontinued.

She took no medicine after the hemorrhage was stopped, excepting a little pepsin and some other digestive to aid digestion, and a simple cough remedy to ease the cough; but tar, lobelia, opium, tartar emetic and such medicines as disturb the stomach and interfere with digestion were carefully avoided.

It is easy for those on a farm to carry out this method, and on several occasions parties who lived in the city purchased a suitable cow and after complete recovery, in every instance, thay sold the cow for nearly as much as was paid for her.

I do not remember any case that followed the directions strictly that was not cured, but several persisted in declaring that they could not take it until so much valuable time was wasted that they lost their lives by it.

I have found the same diet, when above directions were carried out carefully, equally successful in increasing the weight and strength of those run down and debilitated from other causes.

No less a medical authority than Dr. Osler says: "The cure of tuberculosis is a question of nutrition; make a patient grow fat and the local disease may be left to take care of itself." Many others who have occupied the highest position in the medical profession have said the same; but none have pointed out a successful way of accomplishing it.—Hoard's Dairyman.

LET THE EXPERIENCE OF THE MAJORITY OF FARMERS BE YOUR GUIDE IN BUYING TWINE

THE time has come to order your binder twine for the 1910 harvest. Twine dealers are placing orders for their season's stock. The mills are running. Now is the time for you to decide the twine question. It is something that requires careful consideration. The success of your harvest will depend on the uninterrupted work of your binder, for no binder can work well if you use a cheap grade of binder twine.

It is our aim to have every farmer who uses I H C twine go through the 1910 harvest season without a break in the field. We have much more at stake than merely selling twine. Your interests and ours are the same.

We know that the raw materials from which I H C twines are spun have the quantity and quality of fibre that insure greater strength than is found in any other twine. They are evenly spun—smooth running—do not tangle in the twine box—work well in the knotter, insuring perfect binding and perfect tying. They insure your being able to work your binder through the entire harvest season with greatest speed and economy and are therefore practical profit insurance.

Those who buy cheap twine will certainly have trouble—delays due to tangles, knots and breaks will mean the loss of valuable time—and every delay at harvest time will cut down your profits.

There is a sure way to avoid this. Let the experience of the past be your guide in purchasing your twine. The verdict of the majority of the farmers of this country is a safe guide. Their decision should have more weight with you than the statement of any twine manufacturer. These farmers know. They have the same problems confronting them that you have. They have no axe to grind. They do not sell twine. They are only interested in results.

I H C Brand of Sisal—Standard Sisal Manila or Pure Manila

Are the twines used by the majority of the farmers of this country. They have been proved to give the best results. Eighty-five to 90 per cent of the farmers use Sisal. It is smooth running and works at steady tension without kinking or tangling in the twine box—insuring perfect binding and perfect tying. Its only equal is the really high grade Manila twines such as bear the I H C trade-mark.

Your interests and ours are identical on this twine proposition. We have more at stake than selling twine. We are vitally interested in the successful operation of hundreds of thousands of binders. On their successful operation depends our success—and we know they cannot operate successfully with poor twine. No binder made can. For this reason we have given the twine problem careful study. When we say "Stick to Sisal or high grade Manila bearing the I H C trade-mark"—we do so because we know them to be the highest standard of excellence in binder twine.

But we don't ask you to do as we say. We want you to be the judge. But your judgment to be right should be based on facts—not on the statement of any twine man. And the fact is—that the majority of the farmers of this country use I H C twine. Sisal or Standard (which is made from pure Sisal) comes 500 feet to the pound; high grade Manila, 600 feet to the pound; Pure Manila, 650 feet. See your local I H C dealer at once and let him know how much you will need. If you want more facts on binder twine, write the International Harvester Company of America at nearest branch house for information.

CANADIAN BRANCHES—Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

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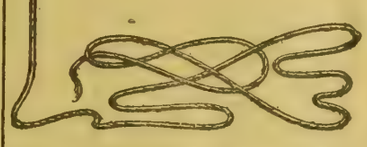

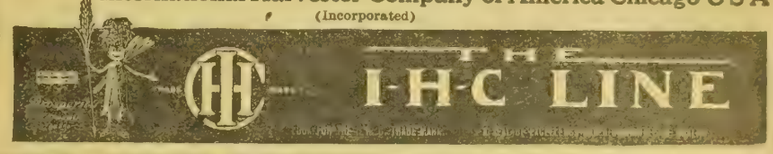

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Should Grow Good Stock, hence Should Never be Abused with Poor Seed.

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Sows the BEST SEEDS, hence a Clean Farm, Largest Crops, and Maximum Profits.

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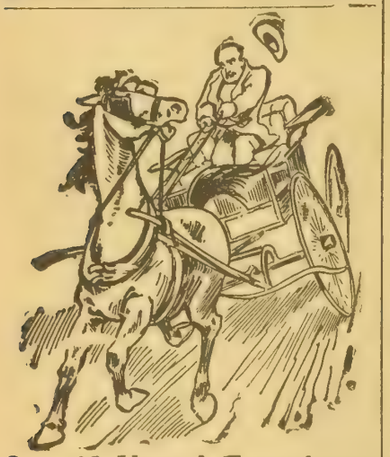

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We are offering for the next 30 days our No. 1 "Martello" Single Strap Nickel Mounted Driving Harness at only $12.00. It is fine enough to suit any one who needs a medium price set, well made and well finished Harness.

Ask your dealer for this Harness, and if he does not keep them, write us, and we will forward the same prepaid to your nearest express office on receipt of the amount. **If not satisfied we will refund the amount.**

DESCRIPTION

Bridle—⅝; box loop cheeks; patent leather blinds.

Breast Collar—Single strap.

Traces—1⅛ wide; heavy single strap lined at both ends; sewed to breast collar.

Saddle—2¾ in., full padded; patent leather; swell skirts.

Breeching—Well made, with flaxseed stuffed cropper.

Reins—Cut from good leather.

H. HORTON & SON., Ltd.,

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THE HORSE.

Value of the Brood Mare.

When selecting mares for breeding purposes it is all important to pick out the very best individuals that can be had. While it is not necessary to always have registered mares as brood mares, unless you are going to breed pure bred stock, and thus must have their pedigrees as well as certificates of registration before you can sell them as such, yet it is the mistake of a breeder's life if he uses undersize, malformed, awkward, and, worse still, unsound mares as brood mares. Too much is expected from the sire, and too little from the dam, in horse breeding more than any other line of stock breeding. If the colt is a poor individual when it is first born, the stallion gets the blame; if a fine colt, the stallion gets the credit by nine-tenths of the farmers throughout the country. Now, as a matter of fact, history shows that all of our great men were sons of exceptionally bright women. Even if they had not the advantages of anything more than an ordinary education they were women of fine common sense and manners. Close observation will also show that the best individual horses in all of the different breeds, horses which have won many prizes in the show rings, and races on the track, have been colts of mares that were exceptionally good individuals in their respective breed and class. Therefore, no breeder can pay too much attention to the individual mare when he is contemplating using her in the stud. Soundness is the first thing to consider when examining this particular animal; never breed an animal which has even a tendency towards any constitutional unsoundness; if you do, the trouble will be shown in the get sooner or later, and continually, if you keep up the practice of breeding unsound animals. The following are some of the more common constitutional evils which render the mare unsound for breeding purposes, viz., weak eyes. Never breed to a blind animal. I know that it is sometimes done without bad results, but such cases are exceptions and not the rule. Bone spavin, bog spavin, ringbone and curbs are some of the constitutional defects which are very often seen in colts out of mares known to be so affected. A brood mare should have good action and style for her class. Size is an all-important factor, yet I do not believe in making a sacrifice of substance, quality, style or action for size alone. In the opinion of the writer the question of size depends largely upon the purpose for which the horse is intended. There is no worse mistake to be made than to try to overcome a lack of size in the colt by breeding a very small mare to an exceptionally large stallion or the reverse. This marked difference is too great to get good results. We speak of "mating" animals when we breed them, and in the true sense of the word "mates" should be as near the same conformation, size, etc., as you can get them. This practice carried out in a general way, at least, in breeding our domestic animals, especially in horse breeding, would give us a more uniform type of horse—animals with the very best action, conformation and style in the particular breed. This practice of having the mare and stallion as near as possible the same size, would also lesson the mare's chances for accidents at the time of foaling. Do not try to get medium size horses by breeding a 1,200-pound stallion to a 600-pound pony mare. If you want a 900-lb. pair of horses to drive to a double buggy, then breed a 1,000-pound stallion to a 900-pound mares. By these abrupt crosses, that is, breeding very large stallions to undersize mares, you get as a result large bodied horses with legs two small to stand the weight of the body when subjected to work, or you get the most awkward animal in the world—a small body with very large legs, a horse that will trot all day but not get out of your sight. In fact, the breeder can get just what he wants in size, conformation, action and speed if he will only use judgment in selecting his stallions, and mares to mate him.—J. G. Ferneyhough, in the Practical Farmer.

The Horses in Hot Weather.

I recently read a very valuable and interesting article concerning the treatment of work horses during the hot weather. A little extra care and attention during the next few months means no end of comfort to your team, and it means a much better team, not only during the time, but one vastly superior in the future, for horses with galled necks and shoulders are apt to recover slowly, if they do not become habitually balky, as the result of their trying to work when the least effort causes them great pain.

What I started to speak of was the protection of the horses' heads from the effects of the direct rays of the sun during the hottest hours of the day, especially when the air is filled with humidity, and it is so very difficult to get a breath of air. I have seen the strw bonnet tried, but it often annoys nervous horses more than it can possibly help them.

The remedy that I have tried and found the most effective is a sponge placed beneath the bridle between the ears. If it is a very hot day and you find your horses are suffering severely stop at a watering trough and bathe the tops of their heads quite thoroughly, then wet the sponge and place it as above, and note the result. You have a fresh team in an instant. Repeat the dose as long as the heat continues to oppress them, and you will have a fresh team all day, and when the day is over you never would know they had been exposed to the heat at all. It is a simple remedy, and if you try it once you will try it often when occasion requires.

I once had a driving horse that felt the heat terribly on oppressive days,so much so that I did not drive her when I could avoid when the sun was hot. Once, while on a long trip I was caught far from my destination in severe hot weather and tried the wet sponge treatment.The result was very gratifying to us both. She enjoyed the bath immensely and soon became so pleased with it that ever afterward when she would be very warm and could reach a watering trough she would duck her nose clear to her eyes, and often more than once.

A good horse will, I believe, drive more than double the distance with half the exertion on a hot day if the wet sponge treatment is applied, and there is no reason to think that it would not be equally acceptable to a horse at work, if he was affected by the heat.

But this is not all. If you are on a long hard drive, and the road is at all hilly, and you want a fresh horse at the end of the journey, walk the hills with your horse. You will not be half as likely to start him into a trot, before he has reached the top, if you are on foot, as you will be if he alone is walking; and, again, if you have lightened his load by walking, you have just so much better horse to start off on a brisk trot when the top of the hill is reached.

And, again, you will not be nearly so tired when you have completed

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Sound as a Dollar

That's the only way you can afford to keep them, because any lameness means less work and less profit to you.

Spavin, Splint, Curb, Sweeney, Ringbone, Swelling or Lameness need not prevent your horses from working. Simply use Kendall's Spavin Cure.

It works while the horse works—takes away the pain—reduces swellings—makes legs and joints sound and strong—leaves no scars or white hairs because it does not blister.

Kendall's Spavin Cure

has been the horseman's standby for 40 years and is used all over the world.

Burns, Ont. Sept. 10th 1909.
"I have used Kendall's Spavin Cure and it cures Old Stubborn Cases."
WILLIAM H. DOUD.

Keep your horses sound as a dollar. Get Kendall's today and you will have it tomorrow if needed. $1 a bottle—6 for $5.

When you buy, ask for free copy of our book "A Treatise On The Horse" or write us 51

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

GOOD REPORTS

Home Mixed Stock Food a Success

A short time ago we published in this column a formula for preparing Stock Food at home from Barnes English Compound and fresh nutritious grains.

We have received so many words of praise for this formula that we are reprinting it for the benefit of those who may have chanced to miss it.

The advantage of making your stock food at home, using only the pure medicines and fresh grains, and avoiding harmful drugs and worthless fillers, is certainly of great importance to every farmer and stockman.

The formula is as follows: Mix three pounds of Linseed Meal and six pounds Cornmeal with one pound Barnes English Compound, it will make ten pounds purest and strongest stock food that can be made. S. G. Amsden, Windsor, Ont., will send one pound package postpaid on receipt of 50 cents, money order or stamps.

Strawberry Plants.

Vigorous plants! best varieties, $3.00 per m. Special prices on large orders.

W. O. CREIGHTON,
Riverside Fruit Farm,
West River, Pictou Co. N. S.

Consumption Book FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1532 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

your journey as you will if you sit in one position in a carriage without change all day. Try, it, and see if I am not right.

"The merciful man is merciful to his beast."—E. P. Mayo, in Tribune Farmer.

Fleshing Horses for Market.

The University of Illinois recently issued a bulletin on the "Re,ative Efficiency of Different Rations for Fleshing Horses for Market."

The conclusions drawn from a long series of experiments in fattening horses are as follows:

1. A mixed grain ration of corn and oats, when fed with clover hay, is more efficient than a single grain ration of corn for producing large gains in an eighty-four day feeding period.

2. While a ration of corn, oats, and clover hay is more expensive with prices of feeds as stated, that one of corn and clover hay, the gains are such as to make its use more economical.

3. Clover hay when fed with a mixed grain ration of corn and oats is more efficient for producing gains than timothy hay. In this test clover hay produced 58 per cent more gains than timothy.

4. A ration of corn, oats and timothy is not satisfactory for producing finish in fleshing horses for market, but may be materially improved by the addition of oil meal.

5. Experiment No. 2 showed but little difference in the efficiency of a ration of corn and oats where the oats fed equalled only one-fourth the amount of corn and where the oats and corn were fed in equal quantities by weight, with clover hay as roughage in each ration.

6. A ration of one-fourth oats and three-fourths corn proved more economical than one of half oats and half corn.

7. A ration of corn and bran fed in proportions of one part bran to four parts corn by weight is superior to an all-corn ration for producing gains when fed in conjunction with clover hay.

8. This test seemed to indicate that there is danger of feeding too much bran for best results when clover hay furnishes the roughage part of the ration. The bran and clover combined produced a too laxative condition.

9. A ration with a nutritive ratio of 1:10 is too wide for best results in fleshing horses. In these tests the narrower the nutritive ratio the larger the gains. Best results were secured with a nutritive ratio of 1:8.

10. Exercise has a retarding effect upon the taking on of flesh. In this test the horses receiving no exercise made 24 per cent more gains than those having a daily walk of 2.8 miles.

11. While box stalls are safer than single stalls for stabling horses, they are also more expensive and do not offer merits not possessed by single stalls so far as they may influence the horse in taking on flesh. The horses stabled in single stalls made 16 pounds or 8 per cent more gains in 84 days than those in box stalls.

12. Thin horses of some market classes will not return as large a profit in feeding as those of other classes. The kind of horses it will pay best to feed depends partially upon the season of the year when marketed. All heavy horses will pay better than light horses, and good choice animals better than those of the lower grades.

Shoeing Horses.

The spring is on and soon the road and track horse will have his road and speed shoes on. A horseshoer cannot make a good hoof out of a bad one, but he can help a bad one, if he knows his business and you will let him, and he can keep a good foot good, if you do not overdrive and when heated let the horse get chilled. A bad chill in a horse generally settles into his feet and he is foundered; or, partially so without being noticed. The next morning after a hard drive or fast work on road or track, place your hand on each hoof in turn. If they, or anyone of them is warmer than normal do not, as you love your horse and hope for his future, give him but gentle exercise until such time as his feet recover their usual cool condition. Especially in training a colt or filly to trot or pace is the care essential. Don't speed him, or her, at all unless the feet are in their normal cool condition; speed only when the feet are feeling so good that the youngster will not care where or how hard he or she slaps them down.

Be careful about the youngsters first shoeing. Have the shoe made to fit the hoof. The inside of a youngster's feet are generally straighter than the outside. Nature makes them that way to prevent interfering. Keep them in that shape. On the bottom of the foot pare the walls down level with the sole and then, on your life, stop! Leave the sole alone, it will wear down soon enough and even with all the protection nature has given it, you may need to supplement it with pads, if your colt goes so fast, as to make you think he is running away. If you take our advice you won't speed your horse fast on his first set of shoes, especially round one of the turns on a track. Remember that your shoer does not yet know how the youngster, or oldster, for that matter, brings his foot to the ground, whether straight in the swing of the leg and flat on the shoe or whether the swing of the leg is on a curve and the fall of the foot strikes the ground level, or on one side harder than another.

We might copy a long treatise on this subject of the wearing of the shoe, but treatises are technical, complicated and confusing, so we will put what we mean in our own—our critics say, countrified—way. Drive the horse carefully for the first three or four weeks on his spring shoes—never speed him unless you know he is going clear and then only for short distances and straightaway. In three or four weeks of road work bring him back to the shoer, who will, of course, remove the shoes. Then carefully observe whether on any of them it is worn more on one side than the other. Almost invariably you will find that such is the case, and generally on his front feet the left shoe is worn more on the outside and on the right foot the opposite—unless the shoer is left handed when conditions may be reversed and going to the left, as is done on the tracks, the latter condition is probably the better one. However, the shoer, if he knows his business, will see what is wrong and he will carefully work until the horse wears his shoe level on both sides of every foot. Better not hurry the shoer in this. He may not be able to remedy the defect in the next shoeing, but wait for your fast work until he does. He can do it if you give him time, and your horse is not at his best until it is done.

We have probably written enough for this time, but will add: Let your colt go over his toes on the front feet easily the first time, as you don't want any forging. A new shoe ought as a rule, to be well rounded out on the bottom at the toe. This will make the horse pick up his feet quicker and higher, thus getting them out of way of the hind feet which are always following the front ones like trip hammers. But in this, go easy until the shoer gets the horse going clear. The writer of this has a filly that can trot on something like a kindergarten track at a wonderful clip, but often the click of a hind foot against a fore one is heard. Tne first thing that the shoer must do is to get her to avoid that click when she gets old enough to be driven. If the owner persists in making her go fast before that is done she will begin to "cross-fire" or "hitch" or something worse—see!

DON'T JUDGE A MANURE SPREADER BY *LOOKS*

BECAUSE different makes of spreaders look alike—don't think they are alike. There's just as much, or more, difference between two spreaders of different makes that look alike as there is between automobiles of different makes that also look alike.

It's the way the spreader is built that counts. The way the power is generated, the materials, the design and moving of the apron—the way the power is applied—such things are what you must be careful about in buying a spreader. The best thing is to be sure of the makers—that they are absolutely experienced and reliable.

The market has become flooded with spreaders of slip-shod quality—slapped together in a hurry—since the demand has grown so large, owing to the general recognition of the big money-making and time and labor-saving qualities of good manure spreaders.

The actual value in actual use of

I H C Spreaders

Cloverleaf **Corn King**

has been proved by hundreds of satisfied farmers. Years of experience and study and practical testing go to make our 1910 patterns the very best to be had anywhere. You'll find strength where it ought to be. The construction simple, yet sturdy, with the right power in the right place. The draft is light—there's little friction—the axles and roller bearings are sand, dust, mud and water-proof.

I H C spreaders are made in all sizes, from 30 to 70 bushel capacity, and there is a style for every section and condition. Choose to suit your special requirements from the only complete line. Large, heavy, rapid working spreaders for big operations—spreaders for orchards, vineyards—in fact for every purpose.

It will be of considerable advantage to you to call on our local agent for catalogues and full information, or write the International Harvester Company of America at nearest branch house for these today.

CANADIAN BRANCHES—Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

Cloverleaf Manure Spreader in Actual Use. Covers all the Ground—All Plant Food Washed into Soil by First Shower.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A
(Incorporated)

The best way to increase the appetite of a horse, if such a thing is necessary, is to change his diet frequently.

Prevention is the best cure for all ailments. See that the horses' collars fit perfectly and there will be no more sore shoulders.

See to it that your barbed wire fence is not loose here and there, for one of your best horses may be the one that will get his legs cut.

A colt or horse will live and develope on good hay alone, but he will thrive better upon a two-third ration of hay and the rest straw. A ration of oats given with these will be all the better.

LIVE STOCK.

Feeding the Pig.

The following notes on Feeding the Pig are gleaned from a circular compiled by Wm. Dietrich, Assistant Chief in Swine Husbandry, Urbania Agricultural Experiment Station, University of Illinois.

Water.—The quantity of water fed descends gradually from 12 pounds daily per hundred pounds live weight with pigs two months old, down to four pounds daily for pigs eight months old, and in prime condition for market. The total quantity of water fed seems to be of greater importance than the manner in which it is fed. The best results, however, have been obtained by feeding the bulk of the water after the rest of the feed has been eaten, using enough water to make it palatable. During the hottest weather, however, it seems to be necessary to add a little more water to the dry feed. By giving the pigs dry feed or a thick slop and then free access to water, they did not do as well as in cases where the above specified quantity of water was mixed with all the dry feeds in the form of a slop, The former method, however, produced better results in summer than in winter, but was also comparatively ineffective during the hot weather. This indicates that in winter the pig will not drink enough and that, during the hot weather of summer he will drink too much when he is given free access to water.

Exercise.—A fact that has recently been determined indicates that the influence of exercise upon the functional activities of a pig is an important factor. Hence the lack of exercise to the fall pig is a handicap because, during the winter, on account of cold weather, not so much exercise is usually taken as in the summer, except during very hot periods. For maximum and most economical production, it seems absolutely necessary for the young and growing pigs to have an abundance of exercise. Its chief value seems to be in the influence it exerts upon the respiratory and digestive functions. If pigs are changed from lots where they have had considerable exercise, to lots where they do not have so much, their feed must be correspondingly reduced. Hence they will also make smaller and usually more expensive gains. If the weather conditions are such, as for instance, when it is very cold, that the pig does not take the usual amount of exercise, the ration should also be reduced correspondingly. Other conditions of environment may also necessitate changes in rations.

Changes in Rations.—Changes like those above mentioned must necessarily be more or less abrupt. Otherwise experimental data show that, in general, when changes of more than a very minor nature are to be made in rations, they should be made gradually, both in the feeds used and in the total quantity of digestible nutrients contained therein. It takes time for a pig to become accustomed to changes, so that he will eat, digest and assimilate the new ration as well as the old one, hence the more gradually such changes are made the better will be the results produced.

Pasture.—The results from feeding on pasture indicate that pigs can utilize to better advantage the same quantities of nutrients, in addition to the grass, than were fed in the dry lot experiments. It is believed in grazing the pigs get the needed exercise which stimulates the functions of respiration, digestion and metabolism, thus enabling them to utilize larger quantities of feed to better advantage. That is, they will make larger and more economical gains from a given quantity of feed, grain and pasture combined, when they have exercise, than when they have no exercise.

Feeds.—There are two general classes of feeds, namely, concentrates and roughages. Concentrates are feeds that contain a comparatively large per cent. of digestible nutrients, and a comparatively small per cent. of undigestible material,- or in other words, are the feeds that are not bulky. Roughages or bulky feeds are the opposite of concentrates; those containing relatively large proportions of undigestible material. The pig is an animal primarily adapted to the use of concentrates.

If too much concentrated feed and especially protein, is eaten, the factor of waste is set up which makes feeding much more unprofitable. This is defined as follows:

When a pig is fed more than a certain quantity of nutrients and especially protein, he does not use the excess over and above this quantity as economically for producing gains in live weight as when fed the quantity below this point. The portion lost on account of less economical use is what is here termed the factor of waste. When the animal is once put under such conditions, this habit of wasting apparently is more or less permanently established.

Selection of Feeds.—Feeds should be selected primarily with the end in view of furnishing the proper quantity of digestible nutrigents in a palatable form as follows: Water, protein, carbohydrate, either extract, mineral matter and also bulk. Home grown feeds should be used where possible, but where these are not available commercial feeds may be substituted. While many of the commercial feeds are all right and as good perhaps as those that may be grown on the farm, the profit in general is greater from home feeds. Furthermore, the supply of commercial feeds is limited and available only to a comparatively small number of feeders.

A pig under five or six months of age apparently cannot assimilate as much as he can digest; consequently best results are obtained, if he is not fed more than he can finally use for the construction of body issue and for necessary energy and heat production. In order to limit the nutrients to the amount that the pig can most profitably use, roughages may be introduced into the ration at this time. These serve a double purpose: First, they satisfy the appetite of the pig, and second, they have a tendency to increase his capacity, so that later in life, when he otherwise would not eat as much as he could profitably use he will be able to consume a larger quantity of nutrients. Roughages may also be used in considerable quantities by pigs that are simply being maintained.

Starting at two months of age the pig should have 12 lbs. of water daily per hundred pounds of live weight. This is gradually reduced during the following six months or twenty-six weeks, to 4 pounds, with a reduction of 3 pounds of water for each week.

In order to supply the necessary mineral substances the results on the station farm seem to be quite satisfactory if the pig is given free access to salt, charcoal, air-slaked lime, bone meal, wood ashes, clean soil and soft coal cinders. These, with the exception of the last two, are kept in different compartments of a trough before the pigs at all times.

HORSEMEN ATTENTION!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. They cure Cough, Cold, Distemper, Colic, Glanders, Spavin, Pink Eye and all diseases of the Horse.

TRURO, N. S.

Dear Sirs,—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months standing. In my large experience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends.

E. J. ANDERSON.

DEAR SIRS,— BEAR RIVER, N. S.

We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it.

Yours truly,

CLARKE BROS.

E. S. Leonard Wins the Murray Cup.

The Agricultural College closed its winter session this afternoon. At the conclusion of the examinations, the cup, presented by the Hon. G. H. Murray, Premier of Nova Scotia, for the best judging of live stock by the students of the college, was awarded to E. S. Leonard, of Paradise, Annapolis Co., who received 87 out of a possible 100 marks for judging of horses, beef cattle, dairy cattle, sheep and swine. The runner up was W. L. McFarlane, of Fox Harbor, Cumberland Co. and close to him came W. B. Gornall, of England; John Chisholm, of Glen Road, Antigonish County; A. B. Baird, of Chipman, N. B.; and H. Ross, of River John, Pictou Co. The examinations were canducted by Dr. J. Standish and E. S. Archibald, of the staff of the Agricultural College.

Hon. Mr. Murray has always endorsed the policy of improving the live stock of the Province, and hence this cup for the best judging of live stock comes most fittingly from him. Altogether 42 students contested for this cup.

Tomorrow, a party of college students, under the charge of Prof. Smith, will go to Annapolis and Digby Counties to complete the work which has been in operation during the winter of exterminating the Brown Tail Moth. Only a few days remain before the caterpillars will leave their nests and spread over the trees, making it almost impossible to effect a destruction by cutting and burning the nests. The work of destroying these nests has been in operation since January last and has been more thoroughly done than in any previous year. Altogether, between 1200 and 1500 nests have been picked and destroyed, in comparison with 6000 four years ago, thus showing that great progress has been made in destroying this insect.

Dr. Hewitt, Dominion Entomologist who recently visited the Province recognizing the national importance of keeping this destructive moth out of Canada, purposes recommending that the Federal Department of Agriculture join with the Local Department in the work of eradicating the Brown Tail Moth, and from a general inspection of the area infested, is sanguine of at least keeping in control, if not absolutely destroying the moth. Citizens of Nova Scotia, who are familiar with the conditions in Massachusetts, and know that it costs over $1,000,000 per year to repress this pest in that single State, cannot but endorse the active policy which the Local Department have pursued. It is hoped that during the next few days owners of properties in Kings, Annapolis and Digby Counties at least, will make a very thorough search of their orchards, with a view to finding any possible nests which may be present. The matter is of great private and public importance.

Don't Forget To Dip The Pigs.

Our readers are busy now; more work every morning than can be accomplished through the day. Not the least imperative, however, is dipping the pigs once a month. Our readers may say: It is very easy for you to tell us to do this, but how are we to get the time?

Let us reason together just a little bit. Why are you growing these pigs? Is it not to make use of the by-products of the farm, the skim-milk, the buttermilk, the clover? Is it not, therefore, of the utmost importance that these pigs be kept healthy and that they grow as rapidly as possible? How can you expect them to grow if they are lousy or mangy or dirty; and how can you expect them to be free from lice and dirt unless you dip them?

If you have any considerable number of pigs and do not have a dipping tank, get one and then set a day, if necessary, but dip your pigs are to be dipped. If it is a bright hay-making day, and there is danger of rain, put it off till the next day, if necessary, but hip your pigs once a month. The time spent in dipping them will pay you more money than if spent in the clover field.

It is of the utmost importance when hogs are selling at ten cents a pound, to have them grow as fast as possible; and to do that they must be free from vermin, scurf and filth, and kept in the best possible condition. Once more we say: Dip your pigs.

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The Unruly Member.

By Marion Harland.

(Continued from last issue.)

Certain it was that no somber thoughts clouded the joyous mood in which she came flying to her aunt's room the next evening. Breathless with her rapid ascent of the stairs, she could not speak for a moment; nor was there need for words. Aunt Janet's pleasant remark interpreted the expression of her radiant countenance: "He is here, I see; and you would like to have me behold and be seen by my future nephew."

Cora nodded impatiently, and went on emptying her aunt's lap of the sewing it contained, upsetting the word-box by the operation.

"Never mind it,' observed Aunt Janet. There will be plenty of time by and by to pick up my spools and patchwork. You do not suspect me of any intention to enact Madame de Trop very long on this the evening of his arrival."

She was beguiled into a more protracted siting below than she had anticipated. Prepared as she was to approve her niece's choice, confirmed by her father's endorsement of its wisdom. Aunt Janet was agreeably surprised. There was a mingling of gentleness and dignity in Mr. Miller's manner, a union of heart and intellect in his conversation, which left no room for wonder that Cora should regard him as the embodiment of all that is to be loved and respected in man. The plighted pair were a contrast in behavior and temperament, but one that formed an interesting study. Cora's vivacity and piquant modes of expression never seemed more fascinating than when tempered, not repressed, by a certain deferential appeal in manner or tone to his stronger mind and superior judgement. Seen thus, she was the charming, winning woman; while in him the decided opinions of one perfectly conversant with his subject, independent in behalf and in its declaration, were so softened by his style of addressing her as to draw her on to a free revelation of her sentiments, rather than awe her into reserve. He could never be harsh with me, however deeply I might offend him," Cora had said, that day, to her aunt. Mrs. Barrett acknowledged, as she watched them together, that this was not a girlish boast of unfounded exultation—that while Horace Miller was not the man to look lightly upon any deviation from the path of rectitude, nor perhaps to submit tamely to personal affront, there was nevertheless in him a large-hearted charity and generosity which would overlook and forgive faults, even crimes, in one that he loved.

Cora rattled on merrily, to overcome her trifling embarrasment at the novelty of her position in her aunt's sight. "You are aware," she said to Mr. Miller, "that I lived with Aunt Janet all my life before I was grown. Until within a year or two back, I knew no other home than hers. Then she suddenly awoke to the fact that I was an incorrigibly troublesome article of household furniture, and bundled me back upon my poor. dear father's hands, as other merchants do unprofitable and damaged wares."

Aunt Janet's smile was painfully constrained. "Cannot she speak without exaggeration? Into what trouble may not this foolish, worse than foolish practice lead her?" was her mental comment, as she compared Cora's "facts" with the true statement of the case. The period of Mrs. Barrett's guardianship of her young relative was comprised between Cora's eight and thirteen years, and the "year or two back" signified the lustrum that had elapsed since Mrs. Manning's partial restoration to health, her daughter being now nineteen.

"Your friend, Miss Healy, did us the honor of spending the entire forenoon of yesterday here," said Cora, archly.

"I trust the favor was properly appreciated by the recipients," answered Mr. Miller, in a like strain. "She quite 'talked herself out' for once, I suppose."

"By no means, my good sir. That shows what injustice you are disposed to do her colloquial talents. Her lament at tearing herself away from us, as the dinner-bell rang—she having come before the breakfast things were removed, while the flavor of coffee and buckwheat-cakes 'lingered here still'—had the accustomed pathetic burden, 'not half talked out, my dear creature!

Her comical mimicry of the gosip was highly amusing to Mr. Miller, but Aunt Janet bethought herself of her resolution to retire early, and did not feel that its execution envolved any self-denial on her side.

"Poor child!" she sighed, as she laid her head upon the pillow. "Oh, that mothers would teach their children the worth of that pearl of great price—truth, pure and undefiled! Cora's are only idle words, it is true, but for every one of these we read that we 'shall be called into judgment."

Among Cora's visitors of the following day was Ellen Miller, Horace's sister. The girls' confabulations were always interesting, for the engagement was known to the Miller family, and Ellen was, moreover, the most intimate associate of Cora's at school and in society.

"I chanced to meet Miss Healy as I was making a call yesterday," she said, suspending the discussion of more important matters. "What an unscrupulous gossip she is!"

"What fresh evidence did she grant you of this prosperity?" asked Cora.

"Why. you will not believe it, but, in my presence and hearing, she brought forward the subject of your engagement to Horace, and flatly contradicted it as an absurd rumor, quoting you as her authority! You had, she declared, denied to her that there ever had been anything of the kind, and intimated that you had rejected Horace's proposal from the beginning; and, to wind up the farce, she represented how you had implored her to rectify popular impressions on his head!" Cora was dumb with dismayed surprise. "Did you ever hear a more shameless falsehood or a bolder stroke of impatience?" continued the indignant sister. "And to use your name to foist it off upon the community!"

"What did you say?" faltered Cora, whose changing color was to Ellen only the reflection of her own heat.

"Oh, she did not stop there! She referred to me for my opinion! I informed her, curtly, that she must not expect either corroboration or denial from me, since the alternatives were to cast discredit upon your word, or to betray my brother's confidence. If he were a discarded lover, you were the person most likely to be aware of your own act; if accepted, it was but natural that I, as his sister, should be appraised of the event. I can laugh now, when I think how she withered down as I concluded my speech with a frigid 'good-morning;' but I was not so sensibly cool in talking the affair over with Horace, last night."

"With Horace?" Cora's heart stood still.

"Yes. Is there anything so surprising in that? One would think, you little goose, that he was in danger of believing the ridiculous tale, from your terrified look! 'A likely story!' he said, when it was finished. Cora is the most truthful girl alive, and Miss Healy is the most—well, no matter what! A toad cannot harm a star, let it spit venom from night to morning.' There's a compliment for you, my little lady! Are you not obliged to Miss Healy for having served as the means of obtaining it?"

There was too much of the true woman about Cora for her not to feel a pang of compuction at the necessity of submitting to this unmerited, ill-bestowed praise. The consciousness that in accepting it she was wronging another, however deservedly unpopular that other might be, was a poignant reflection. She became abstracted and pensive, revolving in her mind her folly—she gave it no harsh title—and its present consequences, and determining to be more watchful of her tongue in future. Alas for the repentance which is based upon conviction so imperfect! for the reformation preceded by so partial a view of the nature and extent of transgression committed!

Ellen was speaking of Aunt Janet when her friend again listened. "I regret that Mrs. Barret should have selected this morning for her shopping expedition; I am impatient to see her. But I hope to have many other opportunities of improving so desirable an acquaintance, as she is to pass the winter here. You have visited her frequently since her arrival at B——, have you not?"

"Oh, often!" Cora really thought that she was speaking sensibly and truthfully of the three visits she had paid her aunt in the present residence.

"She lives in the suburbs, or nearly without the corporation limits of the town. I think I have heard," pursued Ellen.

"Almost in the country; but the outskirts of B.——are more eligible as building lots than any street in the city proper. The situation of aunt's house is glovly, and the neighborhood charming beyond description."

"Did you ever hear of a Mrs. Chester, thereabouts? Do you know whether there is a lady of that name, a widow with one child, I think, a resident of B——, or its vicinity?"

"Indeed I do! Her grounds almost adjoin Aunt Janet's. She is very wealthy, keeps up a princely establishment, is quite the leader of the ton, courted and aped by a host of admirers, Are you acquainted with her?"

"I have never seen her," began Ellen; but Cora, volatile as usual, interrupted her.

"Then you have missed the sight of a handsome, a queenly woman. She might rival her daughter in belleship if she chose, but she is too dignified to listen to a whisper of such a thing. I admire her greatly."

"You have met her, then?"

"Scores of times. She and Aunt Janet are extremely intimate. One of the most pleasant days of my life I owe to her hospitality. Her lawn, and gardens, and park are a perfect paradise. In strolling through them, one forgets that there are unsightly objects or painful subjects in the world."

"You alluded to the daughter," said Ellen. "Her fame as a belle has reached my ears before this. Is she as admirable as her mother?"

"Quite as beautiful in person, and more winning in demeanor," rejoined Cora "She is witty, without being sarcastic; accomplished, yet not pedantic; affable, without affectation. At the parties we attended together, she was the most elegant, and at the same time the most simply-attired, lady in the room. Her kind heart gives a certain inimitable grace to her most trivial action. I loved Mary Chester from the earliest moment of our meeting, and parted from her with more regret than I experienced in leaving all the rest of my friends in B——."

"I am afraid I shall grow jealous of your enthusiastic affection for her, if she makes us the visit our parents have planned so long," said Ellen. "However, I will take lesson of her in amiability, and try to rejoice in her pleasure at meeting one she knows and loves, amongst so many strangers."

"Why, you said you had never seen her!" exclaimed Cora.

"Nor have I. That treat is yet in store for me. Our mothers were schoolfellows and boon companions in their girlish days, and their correspondence has not ceased through all the years that have brought age and cares upon both. Recently, there has been a deal of conference respecting an exchange of visits. Several times have been actually set, which have passed without the accomplishment of the important event. At present, the scheme is

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for Mrs. Chester and Mary to come to us about the latter part of January; but hope deferred has rendered us incredulous of its final fulfilment."

Cora brightened visibly. Almost two months off, and an uncertainty at the best, which would, unquestionably, be the worst for her! No need for her to brood upon the idea that she had given Ellen an erroneous and unpardonably highly-colored version of the history of her association with the Chesters. She had seen them repeatedly at church and in other public assemblies; had scrutinized the daughter across the room at one large party, where her chaste elegance of apparel and engaging behavior made her the observed of all eyes. Nay, Cora had even stood next her at supper, and received a graceful apology for a slight injury done to her robe by a falling spoon from Miss Chester's saucer, as her attendant was in the act of handing it to her. Mrs. Barrett, once in a great while, exchanged calls with her more fashionable neighbors, but her retired habits formed too decided an opposite to their gay life to make intimacy likely or possible. The day spent at the Chester mansion was a picnic, held during the absence of the proprietors, and by permission of the steward, in the park of noble old trees that constituted the principal attraction of the place. Cora would have blushed at the suspicion that she had stooped to subterfuge to exalt her personal importance in the eyes of Horace's connections, yet this motive was the spring that had hurried her into culpable misrepresentation. An uncomfortable foreboding would, notwithstanding her attempts to feel easy and unconcerned, find entrance to her thoughts for an hour or so after Ellen's departure, but her native and habitual buoyancy enabled her to shake it off.

"I fear tath Horace is taking an imprudent step in this new venture of his," said Mr. Manning, one morning. "He is a sagacious man of business for one so young; but he is young, and, it may be, has not counted the cost and risk of extending his operations in these troublous times."

"He impresses me as a person of singular judgment for his years," said Aunt Jane, noticing Cora's uneasy look. "Have not his actions heretofore been characterized by prudence?"

"Yes, I suppose they have," commenced her brother, who was a cautious man, and slow of speech.

Cora broke in, eagerly: "Oh, papa! you know that he is discreet. I have heard you say, five hundred times, that he had the oldest head you ever saw upon young shoulders. It is unkind to depreciate him now, when this is the only measure of doubtful propriety he has ever adopted."

"While the wisdom of the measure remains a question, it is but fair that he should have the benefit of the doubt," remarked the ever kind aunt.

Mr. Manning patted his daughter's head. "Agreed, with all my heart! You must not fly out at your father, puss, until you are sure that he means to find fault with a noble friend of yours, whom we all like, although there are degrees of fondness amongst us."

"But you do not really apprehend loss for him, do you, sir?" inquired Cora.

"I cannot say that I do, dear; I merely intimated that his course was a bold one; I feared lest it should prove unwise also, in view of the breakers ahead of business men. I do not understand his drift, but I imagine that he does, so it's all right, perhaps."

"He will outride the breakers, if any one can," said Cora, confidently. "His is a steady eye and hand."

"And a true heart, you might have said," subjoined Aunt Janet, as her niece stopped, confused at the warmth she had manifested in her lover's defence. "Might not a word of caution from you be of use to him?" she continued to Mr. Manning.

"I would have spoken it, had he consulted me at the beginning," was the reply. "I fancy that matters are now in such a state of forwardness that objections would dishearten him, without altering his purpose. My fears may be false prophets, after all. We will hope for the best, and let him have his own way."

Horace did not appear very sanguine as to the result of his enterprise, when he unfolded his plan to Cora. "It may be that I have been rather precipitate," he said, "have trusted too implicity to the representations of others who ought to be better informed in these affairs than I am. I am getting timid nowadays, I have so far greater happiness at stake than formerly. Something more than my own comfort or profit depends upon my success or failure. My pride and joy in our mutual relations is still so new and precious that I am in continual dread of losing it—the common fate of those who have become rich suddenly. Forgive me, love, for troubling you with pecuniary projects. I am ashamed of my selfishness in unburdening my heart of its cares, the details of which must be annoying to you."

"Nothing is annoying or uninteresting that relates to you, answered Cora, with an ingenuous affection for which her auditor honored and blessed her from his inmost soul. "I am troubled, but it is at seeing you cast down. I should be more distressed, if you showed a disposition to defraud me of my right to sympathize with you. Have you any reason, apart from your presentiments, for doubting the expediency of your recent transactions?"

"None, if I except the ominous nods and sighs of a few croakers, and the lowering aspect of the commercial horizon. I called several times at your father's office, while the business was undecided, in the hope of persuading him to the gift of a few words of advise, but was invariably so unfortunate as to find him out or engaged. Has he passed any opinion upon my proceedings in your presence?"

Cora hesitated. The truth, unpalatable as it would be, was upon her lips; then a second glance at his anxious face summoned to her memory her father's concluding remarks: "Objection would dishearten, without altering his purpose. We will hope for the best, and let him have his own way." "We were speaking of the subject yesterday," she replied, as if trying to recall the conversation. Her courage failed fast at seeing his intent expression.

"Well," he urged, as she paused again, "did he pronounce me a headstrong speculator?"

"No, indeed! He declared his entire confidence in your talents and judgment."

"Xcepting as I have displayed them in this one case," suggested Horace, with an attempt at gayety.

"He made no exception, but was hopeful for this, as for the rest of your undertakings."

"Ah! he approved it, did he?" exclaimed Horace, joyfully. "This is too good news to be true! Are you sure that there was no dissatisfaction, no prophecy of evil, mingled with the grateful sentence?"

"He said that yours was a steady eye and hand, which, united with a true heart, made failure almost impossible," said Cora, proud of the enlivening effect of her communication. "Aunt Janet was not backward in expressing her cordial assent to this."

She was doing him a signal favor in thus turning the bright side of the picture to him—in unloading his mind of fears that would impede his progress.

"You are a comforting angel," he said, fondly. "It is almost a luxury to be despondent now and then, so sweet is the cure. I am unwilling to confess how utterly the knowledge of your father's sentiments has revoluntionized my feelings. He would have bestowed his counsel very sparingly, had I solicited it in person. Conscious of this peculiarity of his, I did not persist in my design of wresting an opinion from him. I have boundless confidence in his sound sense and farsightedness. I came here, to-night, depressed and irresolute. It was my wish to see him for a few minutes in private, and ascertain, if I could, how he stood affected with regard to this somewhat bold enterprise. I was ready—more than ready—anxious to abandon it at the eleventh hour, at a single dissuading word from his mouth. How happy am I that I made you my confidante instead, and, by this manoeuvre, became possessed of his most candid decision, unbiased by any desire to conform to my inclinations!"

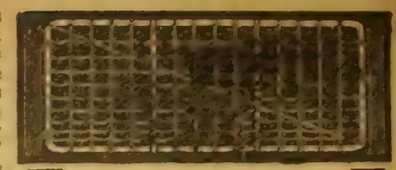
"Had you better not consult him, as it is?" asked Cora, faintly.

"O no! There is no necessity or propriety in doing so. He is careful to a fault, and never would have employed the language you have quoted, had he not been altogether satisfied with the wisdom of my course."

"The language you have quoted!" How mockingly conscious repeated the phrase, as Cora tossed upon her sleepless bed!

"I wished to spare him needless pain," she alleged, in excuse; "I meant it for his good. It cost me a struggle to speak as I did; but could I bear to see him sad, and not strive to console him by any sacrifice of my comfort? How could I forsee that he who is generally so independent in forming plans, so resolute in their execution, was prepared, on this occasion, to be swayed by a word from another? I hope no evil will come of it. I will not allow that he can be defeated by any enemy; he is bound to succeed."

"If he should fail—and failure has come to others as keen of sight and brave of heart—who is to blame for it?"



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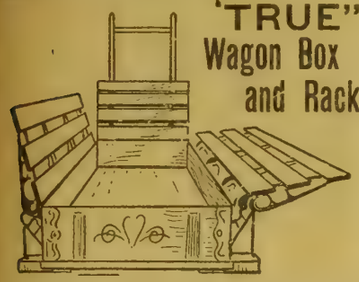

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sneered the tormentor; and Cora, dump at this home-trust cried herself to sleep over the bare imagination of this sequel to her "well-meant" consolation.

A month went by, and nothing had occurred to arouse the fears which had sunk into a lethargic slumber almost as quickly as the pillow wet by her tears was dry. Life was one continued smile of love and beauty to the betrothed maiden. Preparations for the marriage were going forward steadily and quietly. Friends gathered lovingly about her whom they were to resign to care yet more tender and constant, when spring should furnish her first flowers to grace the bridal feast.

It was on a balmy day, which she could have fancied had been sent in advance to remind her most vividly of the bliss of the approaching season, that Cora left home on a mission of mercy—to carry some of the sunshine with which her soul was filled to the chamber of the sick and languishing. Constance Remer was a universal favorite with her associates, each one of whom she converted into a friend. Young, loving, and beloved, she tasted, with a glad and thankful heart, of earth's best treasures, until the Father, All-merciful as All-wise, interposed to save the tempted soul from idolatry. Very gentle was the summons—painless and gradual her withdrawal from an existence whose every hour had been marked by its blessing and its corresponding joy; so calm her passage towards the heaven of never-ending happiness that she, and, what, was more remarkable, those who were nearest and dearest to her, but dimly suspected the truth It was, therefore, with nothing of fear, with hardly a shade of solicitude in her manner or feelings, that Cora inquired concerning the invalid's state, of the physician, as she happened to meet him a square from Mr. Remer's dwelling. Dr. Merrill was a blunt man, when it suited his humor and convenience so to be At that instant, he was pondering upon Constance's case—not weighing the chances for and against her recovery, but speculating mournfully as to the greatest length of her stay among those who little dreamed of the impending woe. His reply to Cora was abrupt and startling:—

"She is as well as she ever will be again, poor thing!"

"Doctor," ejaculated Cora, "Do you mean that—" She could proceed no farther.

"I mean that she is dying," returned the Doctor, wheeling about, and joining her in her walk. "She may live three weeks; she may not see three more suns rise in this world. It would not be a matter of surprise if to-morrow's sun shone upon her lifeless body."

They walked a little way in silence Then Cora queried, tremulously." Is she aware of her condition?"

"No. Why should she be? She is ready for death; that her life has proved, better than any dying triumphs could do. If she were not, it is too late to begin this work. She has no unsettled worldly business to attend to, and that is, to my notion, the sole reason that justifies one in molesting the sick in the hour of moral extremity. Doctors and friends often bungle wretchedly on this point. No! No! I believe in no such miscalled kindness. Let the child pass away peacefully. Human nature is alike, the world over. She would feel alarmed at the near prospect of dissolution, little cause as she has to dread an exchange of worlds; or grief at leaving those she loved might be as disastaous, and hasten the event which it is our aim to delay. To reveal the truth would be an act of absolute cruelty—downright inhuman!"

They were at Mr. Remer's gate, and with an additional injunction to Cora "to do her prettiest to cheer his patient," the Doctor bade her "Good-day."

(Continued next issue).

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Hve you Live Stock for sale? If so, advertise in the Farmer.

DIRECT *from* FACTORY *to* KITCHEN

SAVES *all* MIDDLEMEN'S PROFITS

818 or 918--Elevated Tank or Flush Reservoir for Coal and Wood.
Made of the Best Blue Polished Steel and Malleable Iron.

The "Dominion Pride" Range

MADE IN CANADA and is placed on the market in response to a demand for a **Range** combining the sterling qualities of **Malleable Iron** and **Polished Steel, Unbreakable, Unwarpable, Indestructable, Economical, Design Attractive, Perfect Cookers and Bakers, will Last a Lifetime with Proper Care.**

The ordinary cast iron range is at best a disappointing investment to the purchaser, so soon does it exhibit the effects of wear and tear, unavoidable in a range constructed of such frail and brittle material. The Combined Malleable Iron and Blue Polished Steel Range is the nearest approach to **Absolute Perfection** ever designed for **Comfort, Economy** and **Satisfactory Domestic Service** and wherever installed it will prove itself a continual object of **Satisfaction.** The price at which it is supplied is so modest that it is brought easily within the reach of every prudent family.

GUARANTEE

"Dominion Pride" Ranges are sold on the following Guarantee: If any casting proves defective in twelve months from date of purchase, we will furnish same free of charge. The above Guarantee is very broad, no if's or and's, and any casting that would have a flaw in it that we failed to see in the course of construction, such flaw would show long before the twelve months have transpired when fire is put in range.

INCOMPARABLE OFFER

Our placing direct to the consumer our High Grade **"Dominion Pride"** Malleable and Polished Steel Range, as fully described in our descriptive circular and guaranteed, for less than you can buy a cast iron range. We are enabled to make this extraordinary offer by our **Direct from Factory to Kitchen Plan,** which saves the jobbers, retailers, traveling salesmen and their expenses, giving the consumer the benefit of these savings, which in reality enables the consumer to buy as cheap as the wholesale jobber.

PRICE

Why not buy direct from the **Manufacturer** and save the middlemen's and retailers' profits? **"Dominion Pride" Range** if sold through the retailer or traveling salesman would have to be sold for $69.00 to $78.00, according to the territory sold in. Our price, direct to the consumer, is as follows: **"Dominion Pride" Range,** 8-18 or 9-18 top, with high closet shelf and elevated tank or flush reservoir, with piece of zinc to go underneath range, 8 joints of blue polished steel pipe and 2 elbows, delivered to any railway express station in Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island for $41.00 **(We Pay the Freight),** and delivered to any railway express station in Manitoba, Alberta, Saskatchewan and British Columbia for $49.00 **(We Pay the Freight),** $5.00 to accompany order, the balance to be paid when range is delivered to you. If not convenient to pay cash, will accept your Note.

Write for our Descriptive Circular.

CASH PRICE **$41** Delivered to any Railway Station in Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island. We pay the freight.

CASH PRICE **$49** Delivered to any Railway Station in Manitoba, Alberta, Saskatchewan and British Columbia We pay the freight.

OVER 6000 OF OUR RANGES IN USE IN TORONTO ALONE

Manufactured and Sold only by the

Canada Malleable & Steel Range Mfg. Co Limited, OSHAWA ONTARIO

[IN WRITING PLEASE MENTION THIS PAPER]

OUR DIAMOND JUBILEE YEAR

PAQUET GUARANTEED CLOTHES

Made to Your Measure, But NOT Custom Made.

THIS looks paradoxical, but it's none the less true for all that. What's more, we can prove it to your entire satisfaction, and stand ready to refund your money, if you are not ABSOLUTELY SATISFIED with your Clothes when they arrive.

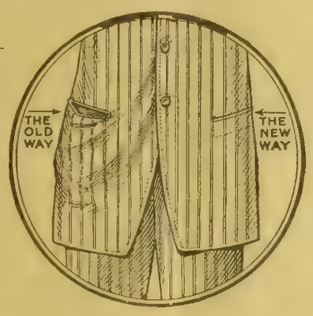
PAQUET Guaranteed CLOTHES, as their name implies, are GUARANTEED to fit you perfectly. All Ready Made Clothes are cut and made up to fit AVERAGE types, not REAL men. That's why they don't fit YOU. And they can't be MADE to fit, either, without being all ripped up and recut—a very expensive undertaking, and, therefore, out of the question.

PAQUET Guaranteed CLOTHES are cut to fit BEFORE they are made up at all. That's why we can GUARANTEE them to fit PERFECTLY. Our new style book tells all about our method of Clothes making. PAQUET Guaranteed CLOTHES are GUARANTEED to be the best value in Canada to-day at from $10.00 to $14.25—worth $13.50 to $20.00.

The Suit Illustrated

is made from absolutely PURE WOOL, navy or black serge, best Indigo Dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unexcelled in this country. The real value is $13.50. Our special price, PREPAID to any part of Canada..... $10.00

Sizes 36 to 44 only. Larger sizes 75c per size extra.



The Suit Illustrated

is made from absolutely PURE WOOL, navy or black serge, best Indigo dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unexcelled in this country. The real value is $13.50. Our Special Price, PREPAID to any part of Canada..... $10.00

Sizes 36 to 44 only. Larger sizes 75c per size extra.

The Famous "BARTELL PATENT" Pockets

are used in all our garments. This is a feature well worth considering. BARTELL PATENT Pockets will not sag nor gap and will retain their shape permanently. This feature not only greatly improves the appearance, but adds to the life of any garment. BARTELL PATENT Pockets are to be found only in the highest grade Clothes, which is one of our reasons for adopting them for use in the making of PAQUET Guaranteed CLOTHES.

Read These Opinions From Satisfied Purchasers

Langdon, Alta.,
February 17th, 1910.

THE PAQUET CO., LTD., QUEBEC.

DEAR SIRS:—Received my suit to-day, and wish to say that you have certainly satisfied me. The value you give is astonishing, as I think I am correct in saying that you could not purchase this suit here under twenty (20) dollars.

Yours truly,
H. D. P.

Yale, B. C.,
February 22nd, 1910.

THE PAQUET CO., LTD., QUEBEC.

GENTLEMEN:—The suit reached me on the 19th inst., and am pleased to say that it is highly satisfactory, and will be glad to recommend your House in future—well made, and a good fit.

Yours truly,
W. D.

Pictou, N. S.
March 27th, 1910.

THE PAQUET CO., LTD., QUEBEC.

DEAR SIRS:—Kindly send me samples as I want to get a suit both for work and Sundays. I see a few of your suits here and they are the best I have seen for a long time and do not know how you can put them up so cheap with such good work on them. Yours,
J. C. P.

Write for Free Style Book

illustrating New York's latest models, and containing samples of the very newest materials for the present season. This book also contains our special self-measurement chart, which is so simple and concise that anyone using it is absolutely certain to be fitted PERFECTLY.

Write NOW! Don't put it off until another time—a postcard will do—you'll get the Style Book by return mail.

THE PAQUET COMPANY LIMITED.

Mail Order Dept.

Quebec, - - Canada

Our General Catalogue

for Spring and Summer is overflowing with special values of interest to every reader of this paper. If you have not yet received a copy, write for yours NOW. Simply say "send your Catalogue No. 23," and you'll receive it just as soon as the mails can get it to you. You NEED this Catalogue if you value money. Write TO-DAY!

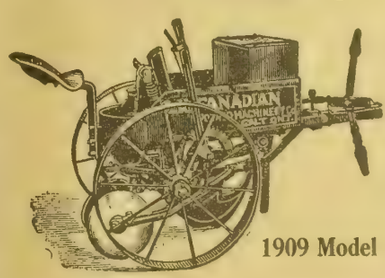
Do Business Girls Make Good Wives?

What can a girl get out of business life, that will help her in her married life?

This is a question that is at present revolving in the minds of marriageable young men. Some persons persist in saying that they can not, or at least do not get anything that is of value in the art of home making. Such people talk without reckoning wisely. Teachers, college girls and business girls smile at the idea, and have so far failed to see why experience and knowledge of any sort should interfere with the career of home and mother. From the beginning, the business girl is taught the value of system, the very basis of good housekeeping and without which no woman can successfully manage a home.

The girl who has worked for her living before marriage, knows what her husband goes out to every morning, whether office or farm, and fully realizes the many annoyances and discouragements he is sure to encounter. So she meets him, not only with intuitive sympathy, but with an intelligent understanding of the situation which alike soothes

O. K. AUTOMATIC POTATO PLANTER.



1909 Model

With or without fertilizer attachment; requires but one man and team to operate. Does not mar or bruise the seed in any way.

Write for full particulars.

Canadian Potato Machinery Company, Limited,

121 Stone Road, - Galt, Ont.

The only manufacturers in Canada of a complete line of Potato Implements.

Troubled With Backache For Years.

Now Completely Cured By The Use Of DOAN'S KIDNEY PILLS.

Mrs. W. C. Doerr, 13 Brighton St., London, Ont., writes:—"It is with pleasure that I thank you for the good your Doan's Kidney Pills have done me. Have been troubled with backache for years. Nothing helped me until a friend brought me a box of your Kidney Pills. I began to take them and took four boxes, and am glad to say that I am cured entirely and can do all my own work and feel as good as I used to before taken sick. I am positive Doan's Kidney Pills are all you claim them to be, and I advise all kidney sufferers to give them a fair trial."

Let Doan's Kidney Pills do for you what they have done for thousands of others. They cure all forms of kidney trouble and they cure to stay cured.

Price, 50 cents per box or 3 boxes for $1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering specify "Doan's."

Cowan's "Perfection" Cocoa

Let the children drink all they want. Healthful, nutritious, delightful.

Absolutely pure. That rich chocolate flavor.

Very economical.

The Cowan Co. Limited, Toronto.

"SILVER PLATE THAT WEARS"

Brides that Receive

Spoons, Forks, Knives, etc., will have something of lasting value, provided the various pieces are stamped

"1847 ROGERS BROS."

Pieces stamped with this trade mark are enduring in quality, beautiful in design and finely finished

In buying Baking Dishes, Trays, Pitchers, etc., ask for the goods of

MERIDEN BRITA CO.

We are under deep obligations to our graduates, who by their ability and proficiency have commended our work to the public, and have given us our present standing.

Our aim is to continue turning out graduates of this class. They have always been our best advertisement.

Free catalogue to any address.

ST. JOHN Business COLLEGE

S. KERR, Principal.

LABELS

Metal Ear Labels for Cattle, Sheep and Hogs

The old standby for all who have stock liable to stray; to question of identification, or disputes as to ownership; for keeping a record of flock or herd, and for general convenience. Do not be without them. Send your name and address for free circular and sample; it is no trouble, and may save you much F. G JAMES.

Bowmanville, Ont.

and inspires. She assists her husband with her heart as well as her brain. Then a girl of average intelligence becomes broader minded as a result of business experience, and when she leaves the school or office for a home of her own, leaves her narrow mindedness behind. She has come in contact with educated, refined people and it has left its impression.

Now it is worth something to a young man who has his fortune to make, that his wife has the same outlook on life as he, that their worlds are not different. Business life has buried deep in her character a taste for intellectual things. Her coffee, like his, has a better flavor at breakfast because she has the ability to comprehend and discuss the things that please him. It is this wider outlook on life that crowds out of a woman's character, the pettiness that makes our natures positively ugly sometimes. Then the business girl learns the value of money. How to spend it economically is quite as important as how earn it. In the first place the average business woman does not spend all she earns on herself; in the second place the average husband will see to it, that his wife has only a reasonable amount of spending money, (in many cases not even a reasonable amount) and in the third place, she has learned from business that co-operation is an invaluable principle, and unity of purpose is essential in any undertaking where more than one person is concerned.

Responsibilities train girls to meet difficulties and overcome them; to look on complications as the natural cause of events. Managing is no longer fearful to her, she is not easily "rattled." This type of woman transferred to the home puts the society girl, who has been made selfish by idleness and a butterfly life generally, at a pitiable disadvantage. A girl coming in daily contact with sensible measures of economy, is not likely to forget them when she becomes a partner in the business of marriage. The old adage that "men must work and women must weep" is not suited to this age. The day of the whining, simpering wife is past—she has no place in the great whirl. Self-repression, self-reliance, dignity and virtue—these are qualities that ripen in an atmosphere of hard work, and the sensible girl in business will prepare herself far the future by improving the present. Naturally possessed of the gentler virtues, they find in business a few of the Spartan, which are quite essential in order to cope with the disadvantages and harhships many of us meet. These girls are able to assist their husbands by a good round of sound sense in managing, planning and devising ways and means. She knows that in this age money comes hard, therefore spends prudently.

The business girl has dicipline, and has learned to bend her will more or less to others opinions, yet has a wholesome independence that comes from nothing in the world so much as the knowledge that she earns her daily bread. She has also tact, which is quite necessary in the managing of some husbands. When he comes in tne house tired and nervously exhausted by his contact with stubborn nature—all struggling for self—she understands his feelings, she knows, because she has "been there."

But I have yet to speak of the most important feature of the business woman—one that affects us all—her offspring. Is it not our greatest pleasure to have our children bright, intelligent and active? Is it not worth more to us, when we have done with the things of earth, to leave a family of well trained boys and girls who will make good citizens, than a bank account? Has she

Truth About Roofing

The first edition of "Truth About Roofing" has been completely exhausted. So we have been compelled to publish a second edition of this famous booklet. This is an improvement on the first edition. It goes right to the "heart" of the roofing problem. It tells the truth about wooden shingles, prepared roofing, slate and steel shingles. It shows the cost per year of service of the different roofing materials, which is the only method of arriving at a correct conclusion as to which material is the best roofing investment. It explains the British Government's Acid Test and our Free Lightning Guarantee.

PRESTON SAFE-LOCK SHINGLES

The information contained in this booklet we believe is accurate. We have taken pains to see that every statement we make can be verified. You can rely on this booklet to guide you right in the choice of roofing materials. We should really charge you something for this booklet, but we will send it FREE as a reward to all who fill in, cut out and mail the coupon to us by return mail. 7

METAL SHINGLE & SIDING Co., Ltd., Preston, Ont.

BRANCH OFFICE AND FACTORY: MONTREAL, QUE.

Fill in, cut out and send coupon by next mail

King Street Factory Please send your booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles.

Name

P.O. Address

County Prov.

Emerson & Fisher, St. John, N. B., Maritime Province Representative.

BLIGH & PRINCE

TRURO, NOVA SCOTIA

We now have a full stock of the following goods on hand ready for the spring trade:

Bissel Disc Harrows
Planet Jr. Implements
Perrin Sulky Plows
Empire Fertilizer Drills
Wilkinson Team Wagons
Champion Steel Road Machines
Great Western Manure Spreaders
Munroe & McIntosh Carriages of every Description.

We will be pleased to quote intending purchasers our best prices and terms, delivered at any railway station in Nova Scotia.

BLIGH & PRINCE

THE DOMO SEPARATOR

The Cheapest and the Best

Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties.
For particulars of Free trial offer write to

J. de L. Tache,
General Canadian Agent, St. Hyacinthe Que.

Agents Wanted all over the Maritime Provinces

not imparted a goodly share of brain, ability and principle to her children? Will she not be able to guide little feet all the more wisely because she learned to govern herself long ago?

Many of our farmers' daughters are fitting themselves for teachers, stenographers, clerks, book-keepers, nurses, etc. True it takes them away from homes where they are sometimes needed, yet in a way it is all right. When our young men want wives they are getting back again on the farm, these girls who have been benefitted and improved by their contact with the business world. It has brightened them up, given them a keener conception of things, awakened new possibilities, and generally fitted them to fill an honorable position anywhere. Some one will say "they cannot cook." Well suppose they cannot. Will they not use the same brain to learn, that they used to demonstrate a proposition in Geometry? Will they not use the same judgment that they would in a business transaction? Will they not use the same economy that started their bank account? Yes surely. She will mix her first loaf of bread with brains, and with brains she will continue to supply her table with dainty and well cooked fooh. Of course we must not generalize too freely, but experience and training must have their value; and no one in the world so appreciates the wisdom and rare qualities of the man who carries on any kind of business, as does his wife, if she herself has once been a business woman.

FARMER'S WIFE.

Andover, N. B.

Forage Crops for Sheep.

The wise shepherd in planning his crops for the year has regard to the needs of his flock. He recognizes the great advantage of providing not only a variety of foods but a succession of sueculent crops the season through. Bulletin No. 12, "Sheep Husbandry in Canada," published and issued free by the Live Stock Branch at Ottawa, takes up this subject in a practical and thorough manner. Under special crops for sheep it deals with clover, alfalfa, vetches, rape, cabbage, turnips, mangels, corn and the several classes of grain. Each is treated separately in regard to method of cultivation and manner of feeding. Dealing with vetches the bulletin says:

"Vetches, or tares as they are also called, make excellent fodder lor sheep, either as a soiling crop or as cured hay. This crop much resembles peas in habit of growth and requires about the same kind of cultivation. Its vines are more slender than the pea vines and stand up better when grown with the stiff variety of oats. Vetches are grown extensively for sheep feed in Great Britain, and to some extent in Canada for the same purpose. The writer, while raising sheep, always grew a small area of tares with oats for soiling the show flock, and in case of a shortage of clover vetches were cured for hay. The crop being fine in vine and very leafy is much relished by sheep and constitutes a rich diet.

"Two varieties of vetches are grown for fodder. The common vetch is the chief sort cultivated, but the hairy variety is receiving some attention. The latter produces the heavier yield, but so far the seed having to be imported is very expensive and few care to bother with it.

"The soil for vetches should be clean, mellow and rich. The seed may be sown in drills or broadcast. A good seeding for either soiling or hay is about three pecks of vetches and four pecks of oats per acre. The vetches are ready to feed any time after the crop comes into blossom and before the seed commences to ripen. For soiling the crop may be hauled to racks, or be distributed on the sod of a pasture field as soon as cut, or it may be allowed to wilt in the swath for a few hours. Vetch hay is made in much the same manner as clover or timothy is handled. Vetches may be pastured by sheep, but this is a wasteful practice, as much of the crop in destroyed by tramping."

Sheep raisers who do not already possess a copy of this bulletin would do well to order one from the Live Stock Commissioner at Ottawa.

RATHER STALE BREAD.

"What! a loaf of bread over 1,800 years old? Nonsense!" Well, my friend, there is no nonsense about it. You can see several of them in the Royal National Museum, at Naples, burned black like carbon, or charcoal. They were found in the ruins of Pompeii, a city that was buried by an eruption of hot, fiery ashes from Mount Vesuvius in the year 79. No one could eat this bread, although carbon is the element in our food that promotes heat in the body.

When Indigestion prevails, your food does not nourish you and you have headaches, poor blood, constipation, dizziness, and other ills. Mother Seigel's Syrup, the sure herbal remedy cures all these ills. Mr. Burton Shortliffe, Central Grove, Digby Co., N.S., writes:—"I was troubled with Indigestion for a long time and found no medicine to give such immediate relief as Mother Seigel Syrup. For Indigestion and all Stomach Troubles it is a grand remedy."

The "BACON" Seed Drills and Cultivators

The only Rear-Wheel Driven Seed Drill on the market. The feed in the "Bacon" handles seed without bruising or breaking, and seeds evenly to the last seed. Machine instantly converted from a regular seed sower into a hill dropper. Feed Cut prevents waste of seed when turning rows.

For sowing Sugar Beets, Parsnips, Radishes, Carrots, Onions, etc., the 1908 model of the "Bacon" is unequalled for strength, lightness, easy running and good work. Write for our complete catalogues.

THE EUREKA PLANTER CO. Limited Woodstock, Ont. 2

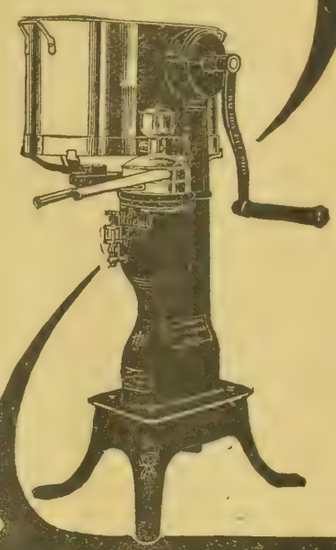
THE I H C LINE

To Bigger Dairy Profits

BUYING a cream separator is a mighty important proposition with you. There is a vast difference between makes. So you must investigate thoroughly before you decide—in order to get the right one. I H C Cream Harvesters are invariably the choice of those who look into the merits of all separators. The I H C line offers the most advantages. The more you know about other separators—the more you will appreciate an I H C.

It is just as poor economy to own a poor separator as it is not to own any. Such machines are expensive at any price. When you buy a separator—buy a good one. It's the only kind that it pays to own. Choose one of the

I H C Cream Harvesters



—for their money-making advantages are proven. You take no chances—you do not pay for an experiment. I H C Cream Harvesters skim to a trace. You get the limit of butter-fat from the milk. An I H C Separator is simple and easy to clean. So you get quality cream—and fresh, warm, pure skim-milk for the calves. And the I H C Separator is so easy running that any member of the family can turn it without effort.

There are two styles in the I H C line—the Bluebell, gear drive, and the Dairymaid, chain drive. Four sizes in each style offer you a wide choice to select from. One of the I H C Cream Harvesters will meet your needs. No matter which one you choose, it will greatly increase your dairy profits for years to come. The materials and workmanship are perfect. See the International dealer before you buy any separator. Don't decide till you know what an I H C Separator will do for you. If you prefer—write the International Harvester Company of America at nearest branch house for further particulars.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A
(Incorporated)

Intending Exhibitors Should Send in Their Names at Once!

To the Secretary of the

DOMINION EXHIBITION

For the First Issue of

The Complete Prize List

Containing all desired information regarding Cattle, Horses, Poultry, Agricultural, Horticultural, Educational and Woman's Work Competitions.

H. J. P. GOOD, Mgr. H. A. PORTER, Sec't'y.

Dr. Bell's Veterinary Medical Wonder cures inflammation of lungs, bowels and kidneys. The 20th century wonder Agents wanted in every county. Write for a free trial $1.00 bottle. This offer only good for 90 days. Limited to 500 bottles.

DR. BELL, V. S., Kingston, Ont.

Also for sale by

National Drug Co., St. John, N. B

Read every add in this issue. They will interest you.

Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

McDonald's

TESTED SEEDS

TRUE-VIGOROUS-RELIABLE

Have Produced the Finest Crops for the past thirty years.

If you grow crops of any kind or description, a request by mail will bring you our handsomely illustrated catalogue.

Write at once. Do it right now. May mean dollars in harvest.

Kenneth McDonald & Sons

OTTAWA, ONT.

Dept D

F. C. WESLEY CO.

ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street,

St. John, N. B.

Dates to Remember.

Dominion Exhibition, St. John, N. B., September 5th to 10th, 1910.

Sussex Exhibition, Sussex, N. B., September 19th to 23rd, 1910.

Charlottetown Exhibition, September 20th to 24th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Potato Growing.

(Continued from page 433.)

on without its draw-backs. The principal ones are the Colorado bug, the blight and the scab. However, these can be offset quite readily in most cases.

The regulation treatment of vines with Paris Green, mixed with flour and dusted on the leaves, while damp with dew or wet with recent rain, has proved an excellent exterminator for this pest. Spraying with Bordeaux mixture is most effective where blight has appeared upon the potato vines. This treatment is satisfactory in case of both early and late blight, and should be repeated at intervals of from 10 to15 days, until the disease is conquered. The addition of 1½ pounds of Paris green to 50 gallons of the Bordeaux mixture will check the ravages of the beetles whenever they appear as co-workers with the blight.

Scab may be prevented by soaking the "seed" potatoes about two hours in solution made by putting one pint of formaldehyde in 25 gallons of water. The potatoes may be soaked before cutting, then handled in the ordinary way, care being taken not to allow them to become contaminated by coming in contact with bags, bins, etc., that have held scabby potatoes. Perhaps a smaller amount of solution might suffice in a case where only one acre was to be planted. Fifteen gallons of solution will treat about 20 bushels of potatoes. Plant on ground that has not grown potatoes before, as the potato scab spores will remain verile in tne ground for a number of years.

The Dominion Exhibition.

The management of the Dominion Exhibition writes as follows: In a short time the prize list for the Dominion Exhibition, to be held in St. John, September 5th to 15th, will be ready for distribution. It will be the most interesting publication of its kind ever published in Eastern Canada. Not only will it explain the vast field of competition among farmers, breeders, manufacturers, dairy men, school children, household workers and others, but it will contain detailed information relative to the distribution of prize monies which in this case will be increased from 50 to 125 p. c. over former appropriations. This generous increase is possible through the grants of the Dominion, Provincial and Civic Governments. Cattle prizes, especially in the Shorthorn, Hereford, Ayrshire, Holstein and Jersey classes have been increased 100 p. c.; in the Clydesdale, Shire and Percheron horse classes the increase is to be 50 p. c.; dairy breeds of cattle will receive 125 p. c. more money than on previous occasions, while the sheep and swine classes will receive much greater incentive than heretofore. Poultry fanciers and breeders will be interested in a new system of judging and the prize list will vary with the number of entries in each class. Dairy awards have been revised upwards as well, after consultation with representatives of the Provincial Department. A notable feature in this section of the show will be the separation of the professional dairymen and the household butter maker; special prizes being awarded for each. In the Horticultural department the prize list has undergone a lot of changes, made with a view to improving the quality of exhibits. Naturally this has entailed the elimination of several classes of Apple, not fit for competitive purposes so early in the autumn. The funds with held on this account have been put into the new classes. Potatoes will be judged in a new manner; in-

Amatite ROOFING

Will End Your Roofing Troubles

IF you will write to-day for a free sample of "Amatite" the end of your roofing troubles is in sight. After you have submitted it to every test that you can think of, you will be prepared to order it not only for your *new* buildings, but for your *old* roofs as well. You will find that it is cheaper to cover them with Amatite than to continue painting and and repairing them.

We make a strong point of our "Free Sample" offer because the smallest sample of Amatite speaks for itself. It is more convincing than yards of talk.

There are all kinds of ready roofings on the market—so-called "rubber roofings," so-called "guarantee roofings," so-called "sand surface roofings."

The "rubber" roofings are no more made of rubber than a cow is made of saw-dust. The "guarantees" that are promiscuously handed out with many brands are hedged around with so many provisos that it will take three lawyers to dissect them and find out what they are all about. The "sand surface" has little or no protective value.

The point to remember is that all of these roofings have to be *painted* every year or two to keep them tight. In other words, it is the *paint* that protects, and not the roofing. If a man will sit down and figure out exactly what this paint costs, he will find that it is more than the roofing itself. Amatite, on the other hand, has a surface of *real mineral matter* and we sell the goods on the broad statement that you need never coat or paint this roofing.

You can lay Amatite on a roof and then forget all about your roofing troubles. *No painting, no coating, no worry.* The man who puts Amatite on his buildings is insured against leaks and trouble for many years.

Free Sample

If you have any doubts about the matter and want to investigate our claims, send for sample and booklet to-day. The sample tells its own story; the booklet is written for practical men. It hits straight from the shoulder.

Address our nearest office.

The Carritte-Paterson Mfg. Co., Ltd.

St. John, N. B. Halifax, N. S.

The Original "HALLOCK" Weeder.

The object of a weeder is to keep down the weeds, therefore, it resolves itself into this one fact: that a weeder should be used early and often, so as not to give the weeds a chance to grow. You will not injure your crops by working the ground directly over the plant or grain, but will do much toward increasing the growth and yield.

You can work them in dry or wet weather, they will not cut the roots of the crop, but cultivate just deep enough to retain the moisture just where it is needed. But, do not forget the old rule—Use the WEEDER early and often, and when you are all through with all kinds of other cultivators, our weeder will finish your job in No. 1 shape. Thousands in use. Write for prices and terms.

Send in your order now for the "HALLOCK" Weeder. Goods are now in hand, all orders will receive prompt attention.

ILLSLEY & HARVEY CO., Ltd.,

Port Williams, Nova Scotia.

Hve you Live Stock for sale? If so, advertise in the Farmer.

stead of judgment in each individual variety, they will this year be classified in 6 types—White Round, White Long, Rose Round, Rose Long, Red and Black. The Women's Work and Household Science Department, also the Educational section have been included in the increase of prize monies.

Hopper Feeding.

I should like to tell my experience in hopper feeding for the benefit of other poultry keepers. Last year was my first attempt to raise poultry and not having time to feed them several times a day I decided on the hopper method and used hoppers from the time they were a week old. The first four weeks I fed them a commercial chick food and the next three weeks a commercial growing food. After that until they were sixteen weeks old, they were fed the following mixture:—

100 pounds cracked yellow corn; 100 pounds whole wheat; 20 pounds whole oats; 8 pounds kaffir corn, white and red mixed; 10 pouods buckwheat; 2 pounds sunflower seed; 2 pounds millet.

After they were sixteen weeks old, whole corn was given them instead of cracked. Everything was mixed together and fed from a box. I use a ½ inch mesh screen which lays on the top of the feed and settles down as they eat the mixture. Besides this feed they have good beef scrap, charcoal, grit and fresh water before them all the time. I always give yhem all the green stuff c can, but in town with small yards they do not get very much.

Last year I had about 125 Rhode Island Reds, all hatched in an incubator and raised in a brooder. The cockerels were sold when twelve weeks of age and averaged better than 2½ pounds each. At sixteen weeks of age two were killed that weighed 3 pounds 9 ounces and 3 pounds, 10 ounces respectively—dressed but not drawn. By September the oldest pullets were laying, being a little less than six months old.

I have failed to find any poultryman in this vicinity who uses the method of feeding whose birds have done as well as mine, and this makes me think hopper feeding is all right. —Subscriber.

SEVEN PER CENT. GUARANTEE INVESTMENT RETURN.

Principal absolutely safe. Established business. American Securities Co., Toronto.

THE FOX STANDARD SCALES

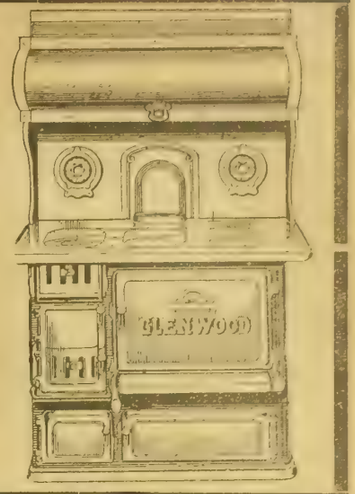
For ACCURACY and STRENGTH ther have no equal Ask your Dealer or write

GEO. M. FOX,
Scale Manufacturer, LONDON, ONT

A Thriving Town.

Amherst, Nova Scotia, is one of the busy Canadian towns. Its manufactured products run all the way from coffins to railway palace cars. People are shod with Amherst shoes, clothed with Hewson underwear, sweaters and tweeds—in fact Hewson pure wool fabrics find their way all over the world—such is the result of down-East enterprise.

Keep Your Money in Your Own Province and You Will Get Better Results From Your Purchases.



No ! it don't pay to buy too cheap, there are always selling goods that you can get cheap, but it don't pay to get too much for your money. In our Glenwood Lines we are building ranges of the best material and workmanship. We neither spare time or money to make our line first class in every shape. We are in St. John where you can always get repairs when wanted, and remember we prepay freight to your station. This cut shows another style of our Glenwood Ranges. We can give you a range for hotels, boarding houses, or for families that have two or more in them. Give us a call when in St. John, whether you want to buy or not. Write for prices.

We have first class Ranges at moderate prices.

McLEAN-HOLT & CO., - 155 Union St., - ST. JOHN, N. B.

Barley Fertilizing Experiments.

Editor Maritime Farmer:—

As I experimented last season with fertilizers on barley I am sending you the results thinking that they might be interesting to intending users of fertilizers. I took three plots of one quarter of an acre each and applied the fertilizer as follows :—

Plot No. 1 Unfertilized.

Plot No. 2 100 lbs, Muriate of potash per acre. 300 lbs. Acid Phosphate per acre. 100 lbs. Nitrate of Soda per acre.

Plot No. 3. 300 lbs. Acid Phosphate per acre. 100 lbs Nitrate of Soda per acre.

The plots were all seeded down to clover and timothy. The Potash and Phosphate were sown broadcast and harrowed in with the crop, while half the Nitrate of Soda was sown when the crop came up and the balance eleven days later. This grain was cut, threshed and weighed, 48 lbs. being allowed to the bushel.

The yields on the various plots were as follow :—

Plot No 1. 25 bus. 24 lbs.
Plot No 2. 52 bus. 40 lbs.
Plot No 3. 30 bus. 40 lbs.

The season was very wet and it was late when the grain was sown. Then a drouth set in and stopped growth. The fertilized plots were not nearly so much affected as the unfertilized plot by the dry weather and kept up a much stronger growth all through the season. The clover on plot No. 2 (complete fertilizer) was very strong, No. 2 (without potash) was fairly good while the growth on plot No. 1 (unfertilized was very weak and spindly. I am sending this without any remarks and will leave farmers to form their own opinion.

BYRON McLEOD,
Kings Co. N. B.

Lime Sulphur Wash verses Berdeaux.

Editor Maritime Farmer:—

In your issue of Feb. 8th, Mr. J. C. Norton asks, what the writer had to say at the N. S. F. G. A. meeting at Kentville, about the use of Lime Sulphur Spray. This was replied to by Mr. F. H. Johnston who gave a formula for home boiled, which is alright for a winter spray, for those who have lots of time to prepare it. But the Home boiled is not as safe to use for summer spray as the factory made, which is carefully tested by experts and guaranteed a certain banner standard, from which there is no danger of burning the foliage if directions on the bonds are carefully followed out. It is very simple to use, fill up the spray casts with water, draw from the Lime Sulphur cask one gallon or whatever strength is required and pour into Spray Barrel without any straining. The writer sprayed 40 acres of orchard last year without ever having a nozzel clog once. With Lime Sulphur one can get over the trees in one-third less time than with Bordeaux, which is very important in catchy weather as all varieties have to be sprayed within a week after the blossoms fall in order to catch the codling moth.

To show that Lime Sulphur is past the Experimental stage, read what the highest authority in America says, Cornell University, Ithica, New York, L. H. Bridey director writes Nov. 6th, I909, "The particular orchard where the work was carried on, Greenings sprayed with Niagara Brand of Lime Sulphur and Bordeaux Arsenate of lead used in each case gave results very much in favor of Lime Sulphate wash. The trees sprayed with Bordeaux showed 82% of the apples russeted many of these so badly defaced and distorted in form as to seriously harm the appearance of the fruit. On the trees sprayed with Lime Sulphur and Arsenate of Lead the codling moth injury was reduced to I.3%. Prof. A. L. Melodes of State College at Pullman, Wash., under date May 8th, I909, said, "Many say along Eastern Washington it has given us very good results much better even than Bordeaux, and there is not the attendant danger of scorching the fruit and foliage when using Lime Sulphur wash. "I may add that I have received information from orchards in Illinois and Georgia where a great many hundred acres of orchards have been successfully treated with Lime Sulphur wash during the past year." Again in a letter dated Feb. 7th, I9I0, Prof. Mulander sums up by saying "I believe you will find Lime Sulphur wash is a more efficient fungicide than Bordeaux."

In I909 Pullman Station issued Bulletin No. I6 which said "Lime Sulphur wash eliminates the scorching so often produced by Bordeaux in rainy seasons."

Mr. L. Ceaser, of the Ontario Agricultural College, at Guelph, says Line Sulphur controlls apple scab in a very satisfactory way. In a test with Flemish Beauty pears last season Mr. Ceaser got them absolutely clean with Lime Sulphur "Vanco Brand" while the surrounding trees sprayed three times with Bordeaux had considerable scab on the fruit and leaves. In conclusion I may say about 50 different fruit growers in the Annapolis Valley used Lime-Sulphur wash last year. "Niagara Brand," everyone will use it again this year. It is now manufactured in Canada saving duty and extra freight which if time is considered will make it cheaper per spray cask than Bordeaux. Some have raised the cry that Lime Sulphur will wash off with rains quicker than Bordeaux. If Arsenate of Lead instead of Paris Green (which is not advisable to use ever with Bordeaux) is used it will stand wet weather as well as the former and also there will be no danger of burning the leaves like Paris Green.

C. O. ALLAN,
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Butter Parchment.

1000 One Pound Printed.....$2.35
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Western Farm Lands For Sale.

In sections, half sections and quarter sections of the best wheat lands in Sask. Wonderful terms to farmers wishing to occupy and work the lands. For particulars and terms write

Clair T. Elderkin.

The Western Real Estate man.
P. O Box 73. Amherst, N. S.

FOR SALE.

130 acre farm; 60 under cultivation; 15 pasture, 15 intervale, 40 meadow; 1 mile from Jubilee Station; 15 miles from St. John on I. C. R.; cuts 50 tons hay, ¼ mile from church and school, house with furnace; two barns, water in house and barn; 250 apple trees. Price and terms reasonable. Apply to F. C MRRITIME FARMER, Sussex, N. B

FOR SALE

My farm comprising about 200 acres, nearly 100 under the plow, cuts seventy tons of hay per year, situated about 1-4 mile from the centre of the town of Oxford. Buildings are in good repair with excellent water privileges also good milk route in connection. For further particulars apply to

WYLIE REID,

Oxford, Cum. Co., - N. S.

1 Cent a Word

FOR SALE one choice Shorthorn Bull 22 months old, girth 6 ft. 1 in. Sure stock getter, WYLIE REID, Oxford, Cum. Co., N.S.

YOUNG MAN 21 years, wishes a position as manager of stock or poultry farm, 6 years experience, $60 a month. HARRY MCDONALD, French River, N. S.

SITUATION WANTED—Am a young man, use neither tobacco nor liquor, and would like position on a dairy or poultry farm. Have not had much experience, but have always lived in the country and know something about farming. Anyone wanting my service will kindly write EDWARD J. KELLEY, Brookdale, Cum Co., N.S.

CHINESE STARCH

This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

For Sale to the Trade by
MESSRS BAIRD & PETERS, St. John, N. B.

OCEAN MILLS, Mount Royal and Lasalle, - Montreal. Que.

SEED OATS.

Start in right now as a seed grain grower. Use every care in preparing the soil. Procure some of our Regenerated Banner Scotch grown Oats, and you will find that not only will you increase your yields by 10 to 30 per cent. as our last year's customers did, but also will your neighbors come to you each season for your seed, and pay you high prices. It costs no more in land, labor, horse flesh or machinery to grow our best seed than common run-out seed, but the prices and yields obtainable are very different. We offer these oats, while the stock lasts, freight paid, at **$1.50** per bushel, in 5 bushel lots. Bags free. Send for samples also catalogue.

Clovers & Timothy

Below find our present prices for guaranteed **No. 1 Government Standard** Clovers and Timothy, delivered, freight paid, at your nearest station, provided you order 200 lbs. or over. Bags 25c each extra.

Send for Samples.

Red Clover, "Sun" Brand, at $11.0 per bushel, (60 pounds.)
Red Clover, "Moon" Brand, at $10.25 per bushel, (60 pounds.)
Mammoth, "Sun" Brand, at $11.00 per bushel, (60 pounds.)
Mammoth, "Moon" Brand, at $10.52 per bushel.
Alsike, "Ocean" Brand, at $9.50 per bushel.
Alfalfa, "Gold" Brand, at $13.40 per bushel.
Timothy, "Diamond" Brand, at $3.75 per bushel, (48 pounds.)
Timothy, "Crescent" Brand, at $3.25 per bushel, (48 pounds.)

Geo. Keith & Sons,
124 King St East., - Toronto
Seed Merchants since 1866

Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—Q. R. S. T.

Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS.
Box 598 GEORGETOWN, Ontario.

POULTRY.

Hatching with Hens.

If a hen is to be used in the hatching out of the eggs, and where only a few chicks are desired it is always best to depend on the hen, and she ought to be picked out from the flock, writes C. E. Peterson in American Poultry Journal, as one worth keeping when the culling took place in the fall of the year. A good brood hen is a joy for ever, or at least as long as she lives, and ought to be carefully treasured for this purpose. There are hens and hens, you know that; there is the hen that you can handle and take from the nest and she seems to know that you are her friend and not her enemy and then there is the other kind—she begins to stand up on the eggs when she sees you coming, and before you get near enough to the nest to get your hands on her she flies in your face with a yell of terror and makes a commotion such as sets the whole plantation screaming from one end to the other, and every other sitting hen is now on the watch for some terrible happenings, while their curmudgeon is yelling out her hearts desire.

DESIRABLE BROOD HENS.

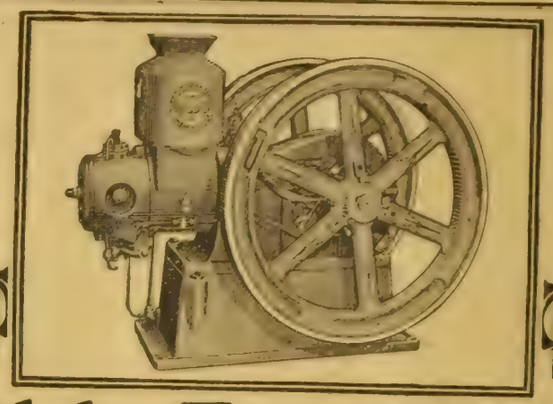
Now the first mentioned hen is the kind that makes a desirable brood-hen and will watch over her flock, carefully lead them around, let you handle them and her and clean out the premises and full well knows that you will not hurt either her or her little ones.

The other hen shodld never be used as a hatcher or brood hen, as in either capacity she will be very undesirable and more than likely ruin the eggs before they are hatched, and if she should manage to hatch them kill many of the chicks before she is ready to shake them off, or if she does manage to see them through she will make every one of her brood exactly like her own self, wild and unmanageable, which is very much to be depreciated in fancy poultry, as one of the chief pleasures in this occupation is to have your birds tame and easily managed and ready to be handled at all times when this becomes necessary.

DO NOT SET DISEASED HENS.

A few good docile and motherly brood-hens are an accessory to every establishment where fancy poultry is raised that is not to be despised. It is common at this time, when setters are in demand, to purchase them whenever they can be gotten and of any sort of breed and variety, and except the greatest care is taken this may be fruitldl of much trouble in the rearing of the young and their future excellence. Roupy birds have at this time of year been introduced with this dreadful disease lingering in their systems, and though no visible sign of it the germs are still present and ready to do damage to the flock into which they are introduced.

Now in most every case it can be detected by a rather unpleasant performance, namely, open the bill of the bird, and by getting a smell of her breath if any trouble the foul oder will be there to a more or less extent. We firmly believe that this



Olds Engines

Send for our new catologue.

YOU can learn engine facts you really should know before deciding on your gasoline engine.

The catalogue proves why it is good judgment to own an Olds engine and be sure you have the most practical, most economical, most durable rather than to get a cheap engine and take chances on losing all it costs you.

Besides the highest quality of workmanship and material the Olds Engine has many special and exclusive features. Each one means a great deal to you.

1. Removable water jacket—may save you $100.00.
2. Seager Patent Mixer has not a moving part to wear or get out of order.
3. No gasoline pump of any kind to leak or be primed.
4. Cylinders and Pistons of special metal—ground to exact size.
5. Cylinder and head one piece—water cannot enter cylinder.
6. Safety Governor—positively prevents engine's running away.
7. Absolute guarantee—No REPAIR BILLS for the FIRST YEAR.

Tell me what you need an engine for and I will assist in selecting the proper size. Write the nearest office.

Branch Offices
R. W. HART, Mgr.,
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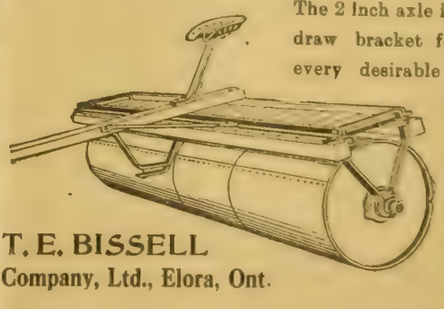
Seager Engine Works,
LACHINE - - MICH.

Drums Guaranteed not to Dent.

The "Bissell"

You'll find the "Bissell" an exceptionally strong, rigid and substantial roller. We guarantee the heavy steel drums not to dent or dinge. They will always do their work perfectly. You can enjoy riding on this roller, too. The position of the seat prevents jars and jolts. The horses will prefer to draw this roller. It runs easily. The "Bissell" has large Roller Bearings one-half inch in diameter and the axle revolves with the drums, therefore it is lighter draft than others. The frame is stiff and strong. The 2 inch axle is solid steel. There is a draw bracket for low hitch. You'll find every desirable feature on the "Bissell."



Dept. "M." will be glad to send you catalogue explaining detailed construction and showing different styles. Write us or see your local dealer.

T. E. BISSELL
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Sent on Approval

We know that you will be charmed with the New Scale Williams Piano.

We know that you will be delighted with its elegance and refinement.

We know that you will revel in its glorious tone—its tender touch—its magnificent action.

This is why we will select a

New Scale Williams Piano

—and ship it to you direct from the factory—subject to your approval

If, for any reason the piano which we select, does not give satisfaction, return it and we will pay the freight charges both ways.

Write us for full particulars about our Plan of Shipping New Scale Williams Pianos on approval, and buying them on Easy Payments.

THE WILLIAMS PIANO CO. LIMITED
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PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment ; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

The stop cock which is attached between the hose and the bamboo rod is of such construction that it cannot leak or sitck to the seat as with other stop cocks. The nozzles like all the other parts of these pumps are 'Perfect'. They require no disgo'ging pin. Manufactured by

R. B. Westhaver, Mahone Bay, N. S.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B

seldom leaves them completely, Scaley feet is also very common in this class of stock gathered from everywhere, and a scaley-legged hen should never be used as a setter or a brood-hen, for she will invariably give this foul trouble to the whole brood, for it is easily transmissible, as the scale-mites will leave the feet of the mother hen for those of the growing chickens, and we have seen chickens a few months old infected with this disease and communicated to them by the mother hen.

It is useless to try to cure this disease at this time, for if the commonly used remedies such as ointment of one kind or another is used it will simply ruin the eggs for hatching by the hen smearing them with it, and though I know of a case where a person dipped the legs in common kerosene before sitting her. I hope that such a specimen of the breed of know little or nothing is rather rare.

Refuse absolutely to use a hen for a setter that shows any sign of scaley feet, for when the scales are even slightly rising from the leg the parasite is there and she will communicate it to the chickens.

Rations For Small Chicks.

In addition to commercial chick feed we like to feed a dry mash as supplementary food. A very satisfactory ration can be made by mixing equal parts by measure, of best wheat bran, corn meal, leaves sifted from cut clover, and fan wheat middlings. To each ten pounds of this mixture, add one-half pound fine ground best quality beef scrap. Be sure that scrap is pure gnd sweet. Cheap or poor scrap is dangerous to feed anh may cause losses. If you cannot be sure of the quality of the scrap, omit it from the ration and feed instead, two or three times a week, a little fresh beef scraped from sweet clean shin or chuck.

Keep a supply of grit, fine granulated raw bone (kiln dried), granulated charcoal and fresh water where the chicks can always have access to them. Keep dry mash always before them. In addition, feed chick food in litter of cut clover, feeding enough so that they will always be able to find a little by scratching for it.

For the first three weeks in addition to the chick food and dry mash give supplementary feedings af boiled cracked rice and wheat. These should be thoroughly cooked until soft, and almost dry, and should be lightly seasoned with salt. Allow the cooked food to cool before feeding and sprinkle with a little ground raw bone. Also give chunks of raw potato for the little birds to pick at and furnish green food like grass, grain sprouts, cut cabbage, etc., giving them a daily supply, all they will clean up readily from the time they are a few days old until they are grown.

Plenty of green food is necessary and heavy grain feeding cannot be sdccessfully conducted without it. Unless chicks have free range on a grass run, an abundance of fresh, succulent green food must be supplied.

We like to keep food before young chicks all the time. After they are three weeks old, they may be given the same rations used for laying fowls.

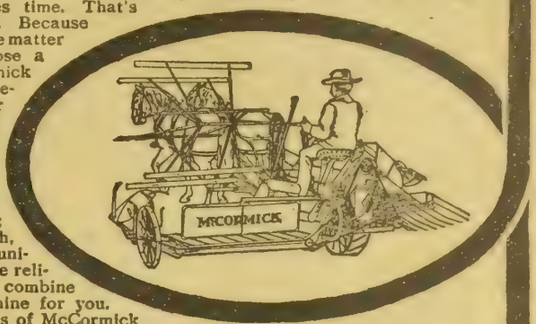
Keep the brooders and brood coops in clean and sanitary condition. Renew the litter material frequently. Either move the coops to new ground often or keep the ground sweet by frequent stirring or occasional sowing of oats.

Chicks can be successfully grown in limited quarters but under such conditions require very much more care. For best results in growing birds for laying or breeding stock, liberal range on a grass range is best.

START TODAY TO GET READY FOR HARVEST TIME

DON'T put it off any longer. From now on 'till harvest you are going to be busier every day. Your grain is likely to ripen all at once. Then you'll want to cut it quickly. You can't do it unless you are prepared with the best harvesting machines—in proper condition.

To be sure of getting the best machine for your needs—you must make a careful selection. That takes time. That's why we say start today. Because we know if you go into the matter carefully you will choose a McCormick. The McCormick Binder will meet your requirements as no other machine will. It is built to meet the conditions encountered on the Canadian farm. It has stood the test of years. Its capacity to handle grain that is tangled or down; its simplicity, strength, durability, light draft, uniform, good work and the reliable work of its knotter, combine to make it the best machine for you.



Other farm machines of McCormick make, a long line, are not less valuable than the Binder. The line includes: Harvesting Machines, Binder Twine, Mowers, Tedders, Hay Rakes and Side Delivery Rakes, Hay Loaders, Disk, Shoe and Hoe Drills, Cultivators and Seeders, Smoothing Spring Tooth and Disk Harrows, Land Rollers and Scuffiers. McCormick dealers also handle Gasoline Engines, Cream Separators, Hay Presses, Wagons, Sleighs and Manure Spreaders.

Every McCormick everywhere is recognized by farmers as a leader in its class. But we don't ask you to take our word for this. We say—Start today to investigate so you will have time to make a proper decision.

For catalogue and specific information on any McCormick machine, call on the local dealer or write direct to nearest branch house.

CANADIAN BRANCHES: International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

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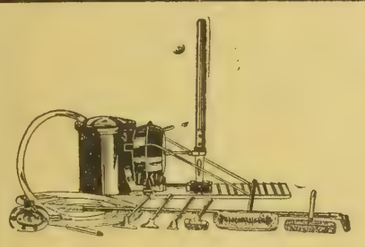

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Rugs, carpets, furniture, bedding, etc., thoroughly and quickly cleaned, without being disturbed.—A cleaner that is light, strong, simple in construction, effective and easily cleaned, and has a blower attachment.

Hand Power $25.00 **Water Motor $35.00** **A. C. Electric $75.00**

McKuen's Perfect Combined Washing Machine and Boiler

A PERFECT Washing machine. The latest on the market, "1910"; one that will do the washing right on the stove, while the clothes are boiling, no rubbing, no damage to the most delicate fabric, producing cleaner and much whiter clothes. A complete surprise to everybody.

Prices $10.00 and up

Purely Canadian. Patented bothhere and in United States.
Write for pamphlets and further particulars.
Mail orders receive special attention.

The Perfect Mfg. Co., Guelph, Ontario.

"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations, as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods, etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs, and its operation is certain and beneficial. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 35c., sufficient for ten days' treatment, to every suffering woman who will write for it. Enclose 3 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

For Better Fruit.

At a meeting of the Kings County Farmers' Association, Mr. W. H. Woodworth, who has been through the county on a missionary campaign in the interests of better fruit, addressed a large audience in Victoria Hall, Berwick, on March 26, 1910. He began by saying:—

"This is a fruit grow ng district and our largest revenue comes from growing apples. This being the case we must put up better fruit by taking example from those who do, such as the orchardists of Hood River and British Columbia. The people in these districts take particular care that other people know where they live and advertise accordingly.

We do not advertise our Province enough; while we are raising inferior fruit, others are putting up extra high quality stuff. Mr. Woodworth advised young men who were about to set orchards, not to make the mistakes of the past but to do the same as the Westerner and plant thirty-three to forty feet apart, unless they put in fillers, but it takes a good deal of courage to take an axe and chop out these trees. Mr. Raluh Eaton, of Kentville, overcame this difficulty by transplanting twelve-year-olds; however, Mr. Woodworth said that he himself had not had any experience of this kind and he would not advise his audience until he knew more more about it.

In the past we have made the mistake of heading the trees too high where they were more liable to be rocked by the winds. When a tree has a low head it is more easily handled at the times of picking, spraying, pruning and thinning.

There is an orchard at Torbrook which Mr. Woodworth inspected which was headed seven feet high, and he told the owner that the land would be worth one hundred dollars an acre less because of the expense in handling, than in those orchards where the trees had low heads.

Orcharding in Nova Scotia is as yet in its infancy. There are thousands of people going West, and these will demand fruit in their markets. Last year five hundred carloads of perishable fruit went from Ontario into the West and they will need yet more. Good fruit is always in demand, we receive poor prices because we ship poor fruit.

Cultivation needs our attention; in Nova Scotia the sod orchard is a thing of the past. Now we must plow our orchards in the spring, or the fall, and keeu up a system of cultivation until about the 25th of June or the beginning of July when the trees will have finished their growth, then sow summer vetch as a cover crop.

The advance in orcharding owes much to institute meetings and to farm papers, from which many have learned the value of spraying. A mistake in the past is that many have not mixed the Bordeaux according to the directions given by the experimental farms. The applicances should be first-class and great care should be taken to mix the sprays properly.

Lime and sulphur spray, like the Bordeau may be applied in the dormant season, it kills spores and sucking insects. Before the first spraying the trees should be gone over with a scraper, taking off all loose bark, behind which will be found millions of oyster-shell bark lice. If these will kill a young tree, how injurious they must be to an old one!

Home made lime and sulphur can never be used as a summer spray, because an amateur cannot always get the strength in the same proportion, therefore there would be danger of burning the leaves.

Mr. Woodworth advises his audience not to rush into the lime and sulphur sprays before trying a series of experiments; one experiment does not prove much, and it is better to remain by Bordeaux while it is successful.

One of the latest diseases with which we have to deal is the fly-speck or sooty fungus, for which the apples should be sprayed when about the size of trancendental crabs or later. This fungus developes on the apples when they are mature, especially when they are stored in barrels, which naturally causes a heavy loss. Mr. Woodworth proved by experiment that the spot is on apparently clean apples, but developes later. He selected exhibition fruits and wrapped each one in paper, packing them in a box between layers of excelsior. When the fruit was unpacked it was badly affected by this disease, which proves that if we are to arrest it, we must spray the fruit late.

Last year the aphis were troublesome, but they should be sprayed with kerosene emulsion or whale oil soap before the leaves begin to curl, otherwise it will be difficult to get a contact emulsion to touch them. It is better to make one special spray for the aphis as internal poisons do not affect them; the caterpillars chew the leaves and take a dose of poison, but the aphis puncture the tissue and suck the juices of the plant. Professor Sears was quoted as saying that he would rather deal with the San Jose scale than the aphis.

With regard to harvesting the fruit, Mr. Woodworth said that we handle our apples too roughly; in one orchard not far from Berwick he was astonished to find a man who used a hook fastened to a pole, whereby he shook down the apples, and then hauled them to the warehouse! Every man should feel that there is a responsibility resting on him to his country in the way he markets his fruit.

Talking of thinning, ten barrels of (No. 3's) Number Three's, taken from a tree were not worth five barrels of Number One's. Seventy-five per cent. of the plant food in the ground goes to grow apple seeds, which in good and bad fruit are much alike so that we should consider the value of thinning; some people say that they cannot afford it, but nothing pays like thinning.

During the last season we sent eighty-five thousand barrels of Number Three apples to England, which, in several cases did not return the grower more than one cent on the barrel. It pays to export good fruit. Even in Nova Scotia choice apples are in demand at $2 or $3 a box. A man told Mr. Woodworth that he would rather pay a good price for a box and know what he was getting rather than buy a barrel with the trodble of sorting out a box of number ones from it.

Mr. Woodworth ended up his address in true patriotic spirit. Such an enthusiasm for the development of our country is infectious. If we can interest the young people enough to stay at home as agriculturists it will do more for the making of our country than anything else. (Does not the greatness of Canada depend on the plow-share and the pruning hook?)

Mr. Woodworth went on to say that we in the Annapolis Valley do not appreciate our luxuries, which are those of the millionaire. Our advantages are superior to those of the city. We have freedom, fresh air, independent water supplys, telephones and, rural mail deliveries, horses and so on, and when we count up all these things, the balance is on the side of the man in the country; besides this the people of the cities are not more intelligent than those of the country.

This is an age of progress; twenty years ago the speaker remembered farms which were only worth one thousand dollars, to-day they are worth five thousand. He remembered when the site of Berwick railway station was a forest, and when the Village consisted of but a few straggling houses, now buildings have gone up in every direction and trees were being planted in such quantities that the Annapolis Valley would soon be one vast orchard.

EUNICE WATTS, A. R. H. S.

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Great Ayrshire Sale at "Glenhurst Farm," Williamstown, Ont.

Mr. James Benning, the proprietor of "Glenhurst," and in fact, Ayrshire breeders as a whole, are to be congratulated on the largest and most successful dispersion sale ever held in Canada on Wednesday, April 20th, last.

Eighty-one head were disposed of in one hour and fifty minutes by auctioneer Andrew Philps, of Huntingdon, Que., whose services were secured a few days previous, owing to the illness of Capt. Robson, who was to have conducted the sale. Never have we seen an auctioneer draw the bids nor hold the attention of the crowd as did Mr. Philps. It reminded one of the auction marts of Liverpool or Glasgow.

The "Glenhurst" herd of Ayrshires has long been noted for its quality. It was established over 40 years ago by the late David Benning, at whose decease some years ago the business was taken over by his son, James, who has followed out the same line of breeding as his father. Selecting a foundation stock of typical Ayrshire females, only the best sires have been used, combining quality and type with utility, thus there was maintained uniformity and superiority in the herd from the oldest to the youngest. To secure an Ayrshire, whether male or female, from the Benning herd, meant that it was a good animal. While the Bennings never followed the show ring very closely, yet they sent out many winners. Their herd became famous in this regard after the World's Columbian Exposition at Chicago in 1893, many of the top winners were from the Benning herd.

That 81 animals 16 of them being calves from two days to three weeks old, should bring nearly $12,000 an average of nearly $150.00 each, speaks much for the Benning's as stockmen. With the exception of the stock bull, Drogan Mains Guarantee (imp) (7317) —26337—these animals were all bred at "Glenhurst." Mr. Benning reserved all of the oldest cows and a few of the younger ones, in all about 15 head, so as to keep in the same line of breeding as he will build up another herd.

The sale was widely advertised and brought purchasers from far and near. Many went away disappointed at not being able to secure any, or possibly, only one or two animals. Among those from a distance were Gilbert McMillan, representing J. P. Graves, Spokane, Wash; P. Ryan, Browester, N. Y.; J. W. Ogdon, Morristown, N. Y.; W. L. McCormick and J. A. Stalter, Patalaska, Ohio; C. W. Short, Ogdensburg, N. Y.; N. E. Clarke, Potsdam, N. Y.; Prof. G. E. Day, Ontario Agricultural College, Guelph; Wm. Hunter, Maxville, (who purchased for a British Columbia firm); Alex. Hume, Menie, who also made purchases for G. H. Tretheway, Toronto; and A. W. McIntyre, Newington, who made selections for a western breeder. Ayrshire breeders were out in legion and the crowd numbered nearly 1000.

W. G. STEPHEN,
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The "Eastlake" Steel Shingle is the only absolutely weathertight shingle on the market. Let us tell you why. A shingle to be proof against the severest storms must have at least a ***three inch overlap.*** The

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is the only shingle that has that much. The so-called four-lock shingles have only an inch and a quarter overlap—not enough to keep out the drifting snow and rain, so this proves the "Eastlake" the only waterproof shingle.

The roofing problem solved. Our free booklet, "Eastlake Metallic Shingles," tells how.

"'Eastlake' shingles can be laid in one quarter the time it takes to lay a four-lock shingle."—The Philosopher of Metal Town.

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"After trying several doctors and spending large sums of money without avail, I was completely cured of Sciatica of long standing after using one package or your Medicine (No. 7 for Rheumatism.)'

No matter how long you have suffered from Sciatica or Rheumatism of joints or muscles—no matter how much medicine or liniment you have used without result—try Father Morriscy's No. 7 before you give up. It has restored health to many who were almost hopeless.

50c. a box at your dealer's or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 85

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To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only abont 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H 309 Windsor, Ont.

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W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

Patriotic Agriculture.

(Continued from page 342)

a house out there, a ten feet square shack will cost you five hundred dollars, and a very small house would cost a thousand. Then there are the frosts, the rains and the hail with which to contend—things which are not boomed.

The trouble with the people in the East is that they have too good a country which they do not appreciate because they get their living too easily.

People talk about the magnificient apples of Hood River, but the flavor cannot be compared with those grown in Nova Scotia. Mr McRae had paid 10 cents for a Western apple of fine color, a fruit which you would take in both hands, but when he tasted it he felt like the little boy who said "stung!" and longed for an Eastern Northern Spy

Once Mr. McRae suggested to a friend that he would visit the famous Okanagan Valley, but his friend replied "Don't do it, it will spoil your dream—better think of it as the real estate men picture it"

There are failures and insect pests in the West, and in competing in the markets of Britain their facilities are not so good as those in the East. Right now there is a crisis in our national life; prices have never been higher that at present. The city populations are increasing sixteen to seventeen per cent faster than those of the country, consequently the demand for country produce is on the increase. The 1908 supplies of the agricultural products of the world are practically used up. Labor is scarce and less efficient, with these conditions prices are bound to keep up, for we must now compete with the city man in the price we pay for labor.

Poor stuff goes to poor markets where it is a drag and pulls down the price of good stuff. We should take example from the California orange growers who would rather let poor oranges rot on the ground than send them to markets where they will pull down the price of good fruit.

Farmers must adopt the latest business methods; there are only a few farmers who are business-like, that is why in politics a farmer is put on one side. When political men wants the farmer's votes, they will come down to the country and tell them that the agriculturist is the back bone of the nation and so forth, but when they go back to the city their attitude changes.

The splendid isolation of the farmer must be done away with, he must have a business education and then go home and apply it in co-operation, for much money has been lost through jealousy.

Twenty years ago when there was no co-operation Denmark was a poor country, today it is one of the wealthiest countries in Europe. By co-operation they save the middleman's profit which goes back into the pockets of the producers.

In Denmark the people pull together, the result is, that there are no beggars and only a few wealthy people.

In the West the wheat growers combine so that the government and the railroads have to listen to them. If Nova Scotians would do the same, they would secure better rates for the produce which they wish to send West.

Co-operation would also help to solve the problem "How to keep the boy on the Farm" where he is much more independent than the lad in the city. The managers of our country do not realize the ability of the farmers, but if we would combine, they would respect us, and at last we shall come to our own.

The mistake we make is, that we are not proud enough of our profession, for agriculture now is altogether a profession, and yet if there is a vacancy at Ottawa to whom do the honors go? To the farmer? No! Has a farmer ever been knighted in recognition of what he has done for agriculture? Yet in Sweden there is a man who has won one hundred and eighty-eight medals in agricultural pursuits and the King of Sweden has delighted to honor him.

EUNICE WATTS, A. R. H. S.

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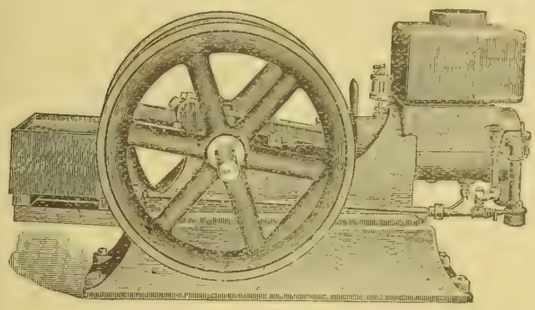

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All the working parts are exposed to view and the duty of each part is readily understood by the user of the engine. The construction of these engines is such that they combine great strength and durability, yet it has been the manufacturers constant study to do away with all extra parts and simplify the construction as much as possible.

If you are looking for a good, reliable and up-to-date gasoline engine to handle—one which sells itself and leaves you a fair margin—write to-day for particulars.

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Ayrshire Bull Calf "Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

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that will give you winners at the fall shows in 1910. I have mated up three yards of single Comb Buff Orpington birds. Every bird in these yards are Exhibition show birds of large size and great layers and Buff to the skin, and from the best strains in the world. Eggs, $2.00 per 15 or $3.50 per 30 eggs. Unfertile eggs replaced at half price.

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CHATHAM, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires

Importers and Breeders of Pure Bred Clydesdales, Hackneys and Shorthorns.

We invite your inspection of Stock

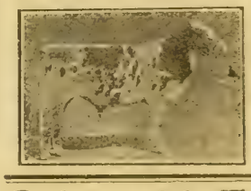
John Bennet, Supt. J. B. SNOWBALL & CO., Ltd., Props.

Farm For Sale.

Two hundred acres. Thirty cultivated, twenty intervale hay land, two in orchard and buildings; remainder woods (maple, hemlock, birch and beech) with plenty of room for summer pasturing. Twelve roomed house, heated by wood furnace. Barn 64x30, room for 8 cows, 3 horses; also two box stalls and grain room. Manure cellar underneath. Wagon shed, ice and hen houses, workshop and sundry outbuildings. Water piped into house, tap and sink in scullery and dairy, and two drinking puncheons near stable. Horse, mare, two cows (in calf) small pen of fowls, Bain wagon, sled, buggy, double and single harness, some oats, hay and straw and all furniture will be sold.

A bargain for cash as owner is leaving Canada. Address.

N. Z., Maritime Farmer, Sussex, N. B.



Wish - Ton - Wish Stock Farm.

HOLSTEIN CATTLE,

We are offering several heifer calves as well as some good bull calves, also a young cow or two, due to freshen in May or June. Inspection invited. Correspondence solicited.

HARDING BROS., Props.,
Welsford, Queens Co., N. B.

Cobequid Farm Holsteins For Sale.

Two bulls fit for service from record of merit dams. Three heifers two heifers two years old, and two heifers one year old, bred to Hellon Dekol's Prince. Three young cows, bred to Sir Rooker Posch Artis. Several bull calves from three to six months old. Come and see them.

SAMUEL DICKIE - - - Central Onslow, N. S.

Barred P. Rocks.

Our claim to be the foremost breeders of this variety in Eastern Canada has been established by ten years of the keenest competition in the show ring with this class of birds. Our latest triumph at the Amherst Fair, winning, for the second time, the silver trophy for the best cock, hen, cockerel and pullet, of any variety, and the specials for the best shaped and the best colored bird of this kind, seals the fact. First cockerel, first pullet, first hen and second cock at Amherst means quality now. First cockerel, first hen, first pen and second cock at Halifax, all in one year, endorses it. Stock and eggs for sale. Satisfied patrons our aim.

CRAIG BROS. - Amherst, N. S.

FOR SALE.

The Stallion, Goldzilian, 2 years old this spring, color, chestnut, one white hind foot and white star. Bred from the best blood and trotting stock on both sides, perfect in conformation, heavy bone and muscle, and when 16 months old weighed 920 pounds and when fully matured will make a 1200 horse. Kind, good disposition and sound. For price, Breeding, etc, apply to the owner.

Colin C. Craig,
Meadow Brook Farm, Middleton P.E.I.

Anybody Can Hatch Chickens With A Buckeye Incubator.

Simple, self-regulating, complete—the only incubator sold on 40 days free trial with money back in case of failure. 10,000 sold last season and not one returned. 100,000 in use. Send for catalogue, or send $7.50 and I will send, by prepaid freight a 50 egg size complete with extra egg tray, egg tester, thermometer, etc.

G. H. SEAMAN,
Moncton, N. B.

Eggs for Hatching.

From pen pure bred White Wyandottes headed by imported cock from U. S. A., pullets from guilds bred to lay. W. Wyandottes belonging to a 237 egg strain. $1.00 for 15. Will exchange eggs for good strain Rhode Island Reds, rose comb.

O. C JONES,
Box 77, Digby, N. S.

F. A. KIERSTEAD,

Commission Mrchant,

City Market - St. John, N. B.

Residence, Albert St., Sussex, N. B. Phone 131

Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

267 Eggs in 365 Days

s the wonderful and unbroken record nade by the Barred Plymouth Rock Hen,

Columbia

who was the foundation of the greatest Egg-producing and Prize-winning strain f Plymouth Rocks in the world to-day. Weight of females, 7 to 10 pounds; males rom 8 to 11 pounds. Eggs for hatching or sale every month in the year and a ew choice breeding birds on hand now, s we are practically done hatching this eason.

For prices and photos apply to the Ori- inator and Breeder of this wonderful train of fowl. Satisfaction guaranteed.

P. A. PEARSON,
CALAIS, - - MAINE.

Gold River Farm Poultry Yards.

Eggs for Hatching from

Houdans,
Silver Grey Dorkings,
R. C. Rhode Island Reds.

Our yards contain birds of show qual- y and high individual merit.
Book your orders early.

W. J. M. MacLEOD,
"Gold River Farm,"
LOCH LOMOND, WEST, N. S.

Shorthorns For Sale.

One pure bred bull 8 months old. one pure red heifer 8 months old, one pure bred heifer 4 years oldt one pure bred cow 4 years old. he first two are sired by Emma's Fashion. he last two are in calf by Emma's Fashion. pply to

CHAS. B. TAIT,
Oxford, N. S.

Chester Whites.

I am now booking orders for some noice Chester White Pigs, both sexes. an furnish pairs not akin.
Correspondence solicited.

WM. ERB, - Sussex, N. B.

Hatch 'Em Sure.

Barred Rocks, pullet or cockerel matings, C., B.Leghorns, White faced, black Spanish, olden Crested Polish, $1.50 for 15 eggs.

J. B. DAGGETT,
Tracy's Mills, N. B.

English Potatoes for Sale!

Ideal Early and Discovery, late main op potatoes. I dug 24 barrels from one barrel anted last year. No disease, while other varie- s rotted. Grown three years in this country. ill keep until June. Apply to

W. H. Giles, "Brooklands" Fredericton, N. B

'Phone 2100. P. O. Box 119.

FOR SALE.

Ayrshire bull fit for service. Four Ayrshire bull lves, Ayrshire females any age. Thirty-five ad to choose from. Intending purchasers et at railway depot. Book orders for Ches- r White swine. Long distance phone in resi- nce.

J. FRANK ROACH,
Sussex, N. B

Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching om me. My Reds are imported from the nited States and were winners at Sussex, Hali- x, Fredericton and Amherst Winter Fair in 09. Prices on application.

Thomas S. Kyle,
Sussex Corner, New Brunswick

HURRY! HURRY!

And write us about how to get an incubator It will pay for itself before you have to pay r it. Ask for our price list of eggs for hatch- g. 30 varieties.

Hartland Poultry Yards, Hartland, N.B.

Milking Shorthorns!

I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

Bliss M. Fawcett,
Sackville, - - N. B.

Eggs! Eggs! Eggs!

For Hatching.

From stock that won the big silver cup for "best exhibit at the Maritime Winter Fair" at Amherst. No better in Eastern Canada. Drop a line and get our mating list. Half price what you pay for Ontario and American eggs of the same quality. B. P. Rock, White and Brown Leghorn cockerels for sale.

SETH JONES,
Box 39, - - SUSSEX, N. B.

Card of Thanks and that Kind of Thing.

Bloomfield Farm.

The undersigned beg to thank their friends for their very liberal patronage in the past which we trust has been mutually satisfactory and at the same time to say that we are still in the "running" at the old stand, with Ayrshires, Guernseys, Shropshires, etc. etc. Our specialties just now in stock for sale are 4 Ayrshire bulls, ranging in ages from 8 months to 18 months, purebred and registered, 1 Guernsey cow 6 years with calf at her foot, two days old, Heifer, this cow is a very superior one in every way and of the higheat registry in the Dominion. Also 20 Shropshire lambs, pure bred season 1910 and fine ones, Likewise, 4 pure bred Coolie puppies 4 weeks old Would be pleased to hear from prospective buyers whose requests will have our prompt and best attention.

John McDonald & Son,
Bloomfield Farm, - Shubenacadie, N. S.

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

Eggs for Hatching,

From S. C. and Rose comb R. I. Reds, Columbian Wyandottes and Black Javas. Write for mating list.

W. H. Henry, Shubenacadie, Nova Scotia.

Spring Brook Farm Ayrshires.

This herd won 1st, 2nd, 3rd in the aged cow class at the Maritime Winter Fair Dairy Test Amherst, 1909, 2nd, 3rd, 4th in the three-year-olds, also 2nd, 3rd, 4th, in 2-year-olds. We have some bull calves to offer, also females all ages.

McIntyre Bros., Sussex, N. B.

FOR SALE.

Three Pullets, 1 Cockerel, 1 Cock, 1 Hen, S. S. Hamburgs; $5.00 takes the lot. Good stock.
Hatching Eggs, White Rock, S. C. R. I. Reds, $2.00 per 15.
Mating list ready now. A card brings one.
Model (Cyphers), Incubators and Brooders at cut prices.

THE BURLEY POULTRY COMPANY,
46 Princess Street,
St. John, - - N. B.

Clydesdale Stallion For Sale.

Clydesdale Stallion, Juneday, foaled June 1st, 1908, sire, Elas hFavorite, Dam, Felicia, both imported by Nova Scotia Government. Of good size of the thick smooth sort, with the best of logs, feet and ankles.

FRED S. BLACK,
Amherst N. S.

Homestead Farm

Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

LOGAN BROTHERS, - - Amherst Point, N. S

BELLEVUE STOCK FARM.

Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.
These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Kinnear Poultry Company, Limited.

New and second hand Model Incubators and Brooders for sale, also one Humphrey Green Bone Cutter.
Eggs from our specially selected pens B. P. Rocks and R. I. Reds, $1.50 per 15 eggs.
Eggs from our utility pens of specially selected egg and market type B. P. Rocks and R. I. Reds, Rocks, $3.50 per 100; Reds, $4.00 per 100. Pekin Duck Eggs, 7c each.

Sussex, - - New Brunswick

SHORTHORN BULLS FOR SALE.

I have, for immediate sale, eight very nice Durham Bulls, from two to fifteen months old. They were sired by a bull imported from Hon. John Dryden & Sons and are out of excellent cows. Write us your needs. We can supply them and will give you good satisfaction

C. C. H. EATON, - Canard, Kings Co., N. S.

"Brooklands'" Holsteins for Sale!

We are now offering one Holstein Heifer, 6 months old, and one Holstein Bull, 6 months old, for sale. These Calves are "not akin." $80.00 will take the pair. For full information write

C. H. GILES, - "Brooklands," - Fredericton, N. B.
'Phone 2100. - - - P. O. Box 119.

—WE ARE OFFERING—

EXTREMELY LOW PRICES

—ON SEVERAL—

PURE BRED AYRSHIRES

—INCLUDING—

Some Aged Cows

2 Year Old Heifers, coming 3 in August, (in calf, due Aug. and Sept.)
2 Yearling Heifers. 2 Fall Heifers. 2 Fall Bull Calves.
Send for descriptive list.

Hampton Stock Farm Co., Hampton, N. B.

MAPLE FOREST STOCK FARM.

YORKSHIRE SWINE.

ADDRESS:

S. J. GOODLIFFE, - Sussex, N. B.

COVEN HAVEN STOCK FARM

St. Andrews, N. B.

The hadsome Clydesdale Stallion Sir Hugh MacAdam (9408) rising 3 years. Choice young stock in both sexes of those wonderful utility dairy breeds; the Dutch Belted and French Canadian Cattle. In Tamworth swine we have several excellent young sows for sale. Prices most reasonable. Write or visit us.

J. R. OASTLER, Supt.

How Trees are Made Symmetrical.

The correction of the forked or defective crotch that is found to a great extend in our soft maples and elms and to a less degree in almost all our landscape trees forms a large part of the "tree surgeon's" work, says Cement Age, New York. This form of crotch usually has its origin in the destruction of the original head or leader. In a case of this kind a double head is formed by the forcing out of two lateral buds. As these shoot up, forming the new top, the old stump at their base gradually decays, allowing water to penetrate into the crotch. Nature tries desperately to heal this wound, but the imperfect joint is constantly forced open by the wind and prevented from uniting by the old stump, until finally, weakened by decay, the tree splits. Many of our finest trees are ruined every year by the splitting of these defective crotches.

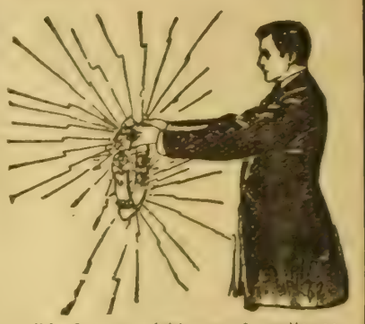
These cases are often exceedingly difficult to treat. The decayed matter must first be removed with great care and thoroughness—in fact, the dentist is not more conscientious in removing decay from a tooth than is the "tree surgeon" in cleaning out these cavities. The opening is then packed tightly with cement or a preparation of oakum, tar and paint. Cutting watersheds in these crotches often takes all the workmen's ingenuity and patience, for, working in the narrow limits of the fork, as he is compelled to do, it is exceedingly difficult to use his tools. But here most of all a perfect watershed is required, as the water running down the limbs and trunk would otherwise find lodgement behind the filling. In the case of a large tree the additional precaution is taken of putting a bolt directly through the crotch, while a chain is placed some twelve or fifteen feet up.

The old method of placing an iron band around a tree to prevent splitting often caused death, or at least deformity, for as the trunk or branch grew in circumference the stricture cut off the flow of sap, depriving the top of nourishment. The improved method consists in placing bolts directly through the limbs and securing them on one end by washers and nuts, while on the other a hook is formed, over which a chain is placed. This serves as a stay, enough play being given in the chain to allow the crown sufficient swing or way.

Fully half the cases of decay of the limbs or trunk were originally caused by improper pruning. Eight out of ten men in cutting off limbs will leave a stump projecting five or six inches. The bark along the circular edge deprived of nourishment dies back, leaving the face of the cut exposed. The unprotected cells cannot resist exposure, and decaying, leave the heart of the tree exposed to myraid enemies. In many trees the cavity caused by the decay of the heartwood is large enough for a man to stand upright in, the entire trouble having been originally caused by a cut of not over eight inches.

Every cut should be made as close as possible, in order that the sap raising through the cambium layer may cover the wound with new bark. Where large branches are to be removed the first cut should be made from below, so that as the branches fall there will be no tearing down of the sapwood or bark. The second cut is then made from above. In order to protect the exposed cells they are painted with a preparation of coal, tar and paint. Where the cut is soft or of unusual size a cap of zinc is fitted to the exact size of the cut just inside the bark and nailed tightly down to prevent moisture from reaching the exposed wood. The new layer of bark will eventually completely cover the zinc, leaving little or no scar.

Weak, Run Down, Worn-Out Men



Why will you be weak? Why do you go on from day to day when you know you are losing your nerve force—your manhood—when you see a cure within your grasp? Do not delay a matter which is the key to your future happiness. Whatever your condition to-day, you will not improve as you grow older. Age calls for greater vital force, and the older you get the more pronounced will be your weakness.

I have the grandest invention of the age for weak, run-down, worn-out men; the surest and easiest cure for all nervous and chronic diseases. Its wonderful power is directed to the seat of the nervous system, through which its vitalized strength penetrates into all parts of the body, carrying new life to every function which has been weakened by disease or dissipation, restoring energy to the brain and power to the system. No weak man will regret a fair trial of the invigorator.

DR. McLAUGHLIN'S ELECTRIC BELT

will make you strong. It will send the lifeblood dancing through your veins. You will feel the exhilarating spark warm your frame, the bright flash will come to your eye, and a firm grip to your hand, and you will be able to grasp your fellow-countryman and feel that what others are capable of doing is not impossible for you. This grand appliance has brought strength, ambition and happiness to thousands of men in the past year.

It is the one sure remedy for the cure of Rheumatism, Weak Back, Weak Kidneys, Weak Stomach, Varicocele, loss of power in young or old, and similar ailments as well as Dyspepsia, Constipation, etc. How can anyone remain in doubt as to the value of this grand remedy when you see so many cures by it?

To prove to you the confidence I have in the curative power of my Belt, I am willing to accept your case, and after I have cured you, then pay me. All I ask is reasonable security. You may then use my Belt at my risk, and

IF I DON'T CURE YOU MY BELT COMES BACK TO ME

You are out the time you spent on it—wearing it while you sleep—nothing more.

Nervousness---Sleeplessness---Run Down

Dear Sir,—One year ago last February I was taken with Nervous Exhaustion (the doctors pronounced it). I suffered all the tortures of that disease; was run down, so weak I could hardly do anything at all. Since I began to use your Belt there has been a marked improvement in my condition in the different ways mentioned. I have slept well every night since wearing your Belt, which is one of the greatest blessings of mankind. I have a great deal more ambition; work used to seem such a mountain now it seems more a pleasure; more strength and vim; memory better; digestion better; constipation about gone, with which I was bothered a great deal; head feels better, and I feel far better in every way. Yours truly,

NELSON ROSE, South Bay, Ont.

The Dr. McLaughlin Electric Belt is a cure for all signs of Breakdown in Men and Women. The Vitality of the body is Electricity—the force in the Nerve Cells. My Electric Belt will give you back this power and enable you to fight on in the Battle of Life!

CALL TO-DAY

Free Book

If you can't call send coupon for free book.

M. K. McLAUGHLIN,

214 St. James Street, Montreal, Can.

Dear Sir,—Please forward me one of your Books, as advertised.

NAME .....

ADDRESS .....

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 8.30 p.m. Write plainly.

RUBEROID ROOFING

(TRADE MARK REGISTERED) (Pronounce it RUE-BER-OID.)

is smooth surface. **No** top dressing to add **weight without substance.**

The **presence** of sand, flint, mica, pebbles or similar surfacing means the **absence** of body that should be there to insure premanency and make the material

100% Roofing.

RUBEROID has outlasted all others. There are none "just as good". **Write for our Free Book** which tells you all about roofing. It is information you should have. **WRITE TO-DAY.**

Beware Imitations.

Fac-simile of the "RUBEROID MAN" is stamped on every roll of Genuine and the word "RUBEROID" appears every few feet on the underside of the material

The Standard Paint Company of Canada, Limited
Manufacturers MONTREAL.
DEALERS EVERYWHERE

Caught Cold By Working In Water.

A Distressing, Tickling Sensation In The Throat.

Mr. Albert MacPhee, Chignecto Mines, N.S., writes:—"In Oct., 1908, I caught cold by working in water, and had a very bad cough and that distressing, tickling sensation in my throat so I could not sleep at night, and my lungs were so very sore I had to give up work. Our doctor gave me medicine but it did me no good so I got a bottle of Dr. Wood's Norway Pine Syrup and by the time I had used two bottles I was entirely cured. I am always recommending it to my friends."

Dr. Wood's Norway Pine Syrup combines the potent healing virtues of the Norway pine tree with other absorbent, expectorant and soothing medicines of recognized worth, and is absolutely harmless, prompt and safe for the cure of Coughs, Colds, Bronchitis, Croup, Sore Throat, Pain or Tightness in the Chest, and all Throat and Lung Troubles.

Beware of imitations of Dr. Wood's Norway Pine Syrup. Ask for it and insist on getting what you ask for. It is put up in a yellow wrapper, three pine trees the trade mark, and the price 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Fruit Growers

DO you want other fruit growers to tell you how

NICO SOAP

AND

PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS., Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

The Gasoline Engine for the Dairy Farmer.

If I owned a dairy farm I would certainly have a gasoline engine for operating my separator. I would have a milk house near enough to my residenc so it would be convenient to have an abundant supply of hot water for cleaning the separator and all dairy utensils. I would have a well in the milkhouse and operate the pump with the engine. I would also have a tank of cold water for caring for my cream. Some of you would think this would be a great expense, but I maintain that it would be a question of economy. I have a friend who has a one and one-half horse power gasoline engine that cost him, I believe, $140. This engine has been in constant use for six or seven years, with practically no expense. They have a herd of 20 Jersey cows and it cost him, on an average, 55 cents per month for skimming the milk twice a day from that herd of 20 cows, a little less than one cent each skimming. No man could skim that amount of milk by hand for that price, if he put any value on his time. Outside of the question of labor, you will get a more exhaustive skimming, as the separator is run at a uniform speed. In connection with this, if the inflow of milk is kept the same, you get cream of the same density from day to day, thus avoiding the annoyance of variation of tests, which is one of our most common complaints. This man says: "For running our separator alone, it takes five gallons of gasoline per month at 11 cents per gallon, to separate the milk from 20 cows. When we run the churn and washing machine it takes from 8 to 10 gallons per month. We saw wood, shell corn and run the grindstone when needed.

I have tested skimmed milk caught from the separator as it is separated on the farm under ordinary conditions, and I have found in some cases the fat in the skimmed milk to actually read over one per cent. It would not take a man who owned a large herd very long to waste enough fat to purchase a gasoline engine.—By Prof. McKay at Gathering of the Iowa State Dairy Association.

An Improvised Bath.

One of our exchanges tells as follows about how one farmer's wife improvised a bath in the house:

Few farm houses have a bathroom. Many farm houses have large kitchens; also large cisterns, plenty of soft water and a good kitchen range. Having these just as other women have them, one woman envolved one thing more. For ten dollars she bought a zinc bath tub, for which she found a place on one side of her kitchen. Her husband being handy with tools soon enclosed the bath tub in a frame made of matched ceiling. The tub was set about four inches from the wall and this four inches was made the base for a lid which could be let down over the bath tub, covering it completely so that it might easily have been mistaken for a large chest.

When the tub was set in place a lead pipe was fitted to the opening in the bottom, carried down through the floor and out to a drain beyond the outside wall. The lumber, the lead pipe together with the trap, the tub and the work of the tinner were the only expenses incurred. Woman-like she made sure no accident would befall by setting a large screw-eye in the wall and a hook in the lid, so that when the lid was lifted to allow the bath tub to be used it was hooked fast to the wall and was in no danger of falling. A little butter and-egg money did it all and not a week passes but the family blesses the hour when this bright idea dawned in the mind of a woman who had pluck to carry it out.

This Man is Young at 55 Years.

He is a "Health Belt Man;" therefore has the vitality and hot, red blood of youth in his veins; he towers like a giant above the ordinary difficulties of life—be a "Health Belt Man" yourself—it gives manly Strength; it makes you young and keeps you young all the days of your life; it takes all the coward out of your make-up--let me give you of this abundant vitality. then nothing can ever conquer you but death itself—100,000 men have taken my advice, why not you?

The secret of life long youth may be summoned up in one word—Vitality. If you have this great natural power in abundance years count for nothing. I use no drugs, I recommend none, Just the Health Belt. No privations, no dietiug and no restrictions, excepting that all dissipation must cease. Put the Health Belt on nights when you go to bed; let it send its power into your nerves, organs and blood while you are sleeping. It gives you a great flow of soft, gentle galvano-vital electricity during the entire night. One application and you are like a new being; it takes all the pain and weakness out of your back; it makes you answer the morning greeting with "I'm feeling fine." It is a great strength builder; it overcomes the results of earlier mistakes and indiscretions; gives you a compelling power, so that you are attractive to all women and men with whom you come in contact. Three months' use is sufficient. S. Coolen, Hubbards Cove, N. S., writes; "I am a man again, thanks to you. Nothing can discourage me now." This is one among tens of thousands.

Free Until Cured Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash if you prefer to deal that way.

These Nature Cure Books FREE

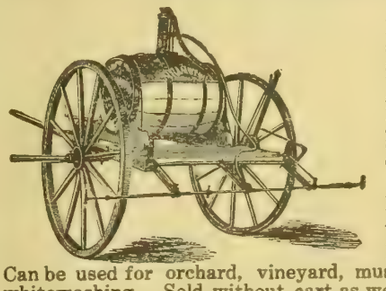
Let me send you these books. They contain much valuable health information, are fully illustrated, describe my Health Belt. Fill in coupon or send you name and address on a postal card.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs—Please forward me your books as advertised free.

NAME.....

ADDRESS.....



The **HAND SPRAYMOTOR** No 1 or No. 2 has 4 to 8 nozzles, all brass sprayer The wheels and nozzles are adjustable, from 26 inches to 36 inches. Vertical adjustment from rack 16 inches. Automatic vertical nozzle adjustment brass spramotor. Ball valves, automatic compensating plunger. Mechanical agitator.

It is mounted on a cart with strong hardwood frame. Has 52-inch wooden wheels with iron hubs and steel axles. For one horse.

Can be used for orchard, vineyard, mustard and potatoes, or for painting and whitewashing. Sold without cart as well. Guaranteed

Write for free Treatise on Crop diseases. **AGENTS WANTED.**

W. C. HEARD, - - - 1381 King St., London.

FLORICULTURE.

All inquiries in this department will be answered by H. E. Goold, Florist, Sussex, N B

Writer says:—I have an Azalia which was purchased from a hot house some time ago finished blooming, should it be put in the cellar for the summer, or left in the light, and when should it be repotted for next winter? If at all. I am informed that it is the prey of many insects if so, what treatment should I follow? Is there any food which is good for carnations? My Mrs. Lawson carnation, which has had several blooms through the winter, seems to need removing as each bloom is smaller than the last. Also is ammonia good for plants?

ANS.—Keep the Azatia in the window until all danger of frost is over when it should be repotted and the pot plunged in the ground in a spot which would be convenient to water it. Put a little gravel or stone under the pot so that craniage may be good. If required in a compact bushy shape, prun to size required but never cut the plant after the 1st of August. The Azalia is commonly infested with the scale insect and mealy bug, for which use kerosene emulsion, either wash or spray, directions for the preparations of which have been so frequently given in this column. The under side of foliage should be sprayed occasionally (say once a week) after the plant has been brought into the house in the fall to keep down the red spider, while out of doors they need little attention if cleared before planting out.

I do not know of any special food for Carnations. Use liquid cow manure once a week or repot the plant into two sizes larger pot and use rich soil.

I do not like ammonia for a plant food however, it is commonly used. I regret that having never used it I cannot give the quantity required. Bone meal is an excellent fertilizer for carnations and a lasting one.

A. L G. writes asking what causes leaves of Palms to dry and sends samples, saying that Palm has been sponged once a week, gets plenty of light, is only watered once a week and was repotted in the fall.

ANS.—The fall is the worse time to repot Palms it would likely injure it. I should also think it should be watered oftener than once a week and if sponged every other day, for say a fortnight, it would be likely to help it.

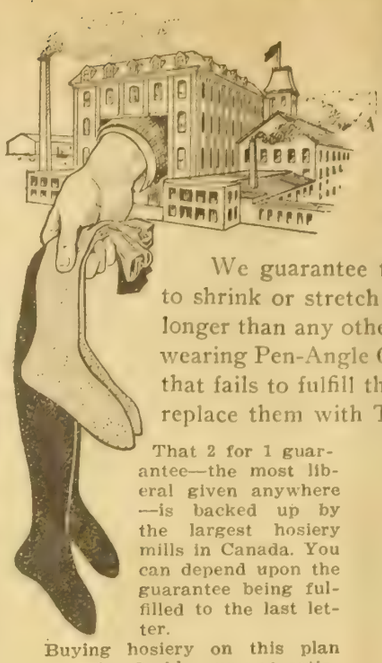
Many plant growers complain that their plants grow spindly even if in the bright sunny window. The trouble is that the curtains are down at the top shutting off the top light that they crave even more than the sun from the side angle. The Premular Obcenica is the plant for spring and summer blooming, this is the largest flowering plant under all conditions that can be obtained and the most generally satisfactory. It has a range of color from white to deep lavender almost purple

QUES.—The leaf of what is commonly called Strawberry Geranium, what is its care, and how can it be grown from seeds or slips?

ANS.—The Strawberry Geranium (Sacifrage Sarmintosa) requires exactly the same treatment as any other Geranium, sunshine, water, good drainage. It is projiagated by putting small pots of moistened soil under the tips of the runners. As soon as these little runner tips have taken roots cut the runners close to the plant and you have your separate plant.

A FARMER reader at Lower Newcastle, N. B., wishes to know what to do with Chrycanthemum when done blooming?

ANS.—This plant exhausts its vitality in blooming and should be cut down to the pot and roots put away in a dark cool place, until February, keeping it on the dry side, then bring to light and water and root sprouts will come up from which when a few inches high take cutting and root them in moist sandy soil. These cuttings will give you good blooming plants next autumn but must be kept growing without check



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These machines form-knit the hosiery to fit the form of the leg, ankle and foot perfectly, without a single seam anywhere to irritate the feet or rip apart.

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

Don't be content another day with hosiery which has those horrid seams up the leg and across the foot—with hosiery less serviceable—but get Pen-Angle 2 for 1 guaranteed hosiery

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns. 2-ply leg, 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

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No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

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and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

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MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton New Brunswick

from start to finish to give good bloom.

QUES.—Another reader wishes to know when stimulants or plant food should be given plants?

ANS —I have answered this several times but will again give my opinion. No plant in pots or boxes should be given food or stimulants until the ball of soil is crowded with roots and nearly exhausted of food. To feed a plant, when it has already sufficient food, is to invite disease. At this season of the year, dark weather and short days, no stimulants should be given except in cases of some strong rank growing plant, that is wholly root bound. Better wait until the February sun gives light enough to enable the plants to assimilate more food and in watering plants during the dark period, it is also better to keep on the dry side, unless your plants are kept in a high temperature. If you have a plant crowded with roots that needs moving and it is not convenient to repot it into a larger pot, wash (not shake) all the soil of the roots and repot with fresh soil into the same or a smaller pot.

As soon as your forcing bulbs are thoroughly rooted and ready to bring to the light, see that the drainage is perfect in each pot or box, as if it is stopped they will rot if kept moist as they should be into full bloom.

Keep them cool during forceing; a high temperature gives poor bloom. Give all the air you can to all your plants.

In answer to FARMER reader of Hampton, Dalhias can be wintered in any position in which potatoes will keep well. Keep in a cool, dry, position free from frost.

If you have covered your tubers with earth in a cool position free from moisture they will keep all right but will start to grow early in the spring. If moisture can reach them in the soil they may rot. Look at them and care for them now.

Roses grown in houses in winter need air and all the sun you can give them and good drainage. Spray or wash the foliage every sunny day to guard against red spider and never let them wholly dry out. When in active growth keep moist but do not let water stand under the pots in saucers. This last applies to all plants not acquatics.

In answer to Oban, C. B., the insect on your Chrysanthum is the Aphis. Make a large paper cone place over plant, cut a few ounces of tobacco fine, moisten it and burn on coals held so that the smoke will go under the cone, this will kill them. Or make a strong tea of the tobacco and dip your plant in or spray it on the plant repeatedly.

The Cheerful Man.

The cheerful man is pre-eminently a useful man.

The cheerful man sees that everywhere the good outbalances the bad, and that every evil has its compensating balm.

A habit of cheerfulness enables one to transmute apparent misfortunes into real blessings.

He who has formed a habit of looking at the bright, happy side of things has a great advantage over the chronic dyspeptic who sees no good in anything.

The cheerful man's thought sculptures his face into beauty and touches his manner with grace.

It was Lincoln's cheerfulness and sense of humor that enabled him to stand under the terrible load of the Civil War.—Ex.

They're Safe From "Flying Sparks" When Protected With

Brantford Roofing

Read the letter of the Trenton Cooperage Mills. Learn how the buildings covered with Brantford Roofing were saved from fire. Certainly Brantford Roofing was given a severe test at this fire.

Here is another proof of the fire-resistant qualities of Brantford Roofing: Along with slate and iron, Brantford Roofing is accepted by the City Architect and Chief of the Fire Department for use in the most congested district in Toronto. We have a certificate to that effect. Do you know of any other ready roofing that has such a certificate? We think not.

The Toronto officials recognize a real fire-resistant roofing when they find one. So do the fire insurance companies. They will give you lower rates for buildings covered with Brantford Roofing. This is a consideration worth thinking about when buying roofing material.

You can put Brantford Roofing on your home or barn or any other building and feel sure that it has a fire-proof roof. You can erect the building right beside the railway track. "Flying sparks" are no menace to a roof protected with Brantford Roofing.

You have your choice of three different finishes of Brantford Roofing. ASPHALT has a silicia sand finish. RUBBER has a smooth, rubbery surface, but contains no "India Rubber." CRYSTAL has a mineral surface of rock crystals. Brantford Asphalt and Rubber are made in three weights. Brantford Crystal in heavy weight only.

You cannot always judge the quality of a roofing by its price. Lower-grade roofings are often sold at about the same price as Brantford Roofing. So make sure you select Brantford Roofing.

Get our big Roofing Book. It tells why we are making Brantford Roofing higher in quality than any other ready roofing you can procure today. We believe you will appreciate these reasons. They stand for lasting service. Send your postcard for this book by next mail. We will send roofing samples, too, if you'll just ask us. 24

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TRENTON COOPERAGE MILLS, Limited

MANUFACTURERS OF

HOOPS, HEADING, STAVES

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BRANTFORD, ONT.

Gentlemen,-

We have much pleasure in telling you frankly, that your Brantford Roofing, proved in our recent fire to be practically fire-proof.

The buildings that surrounded the burned barrel Factory, were covered with your one ply Roofing, and stood the intense heat, and shower of cinders, blowing directly on them by a very strong wind, splendidly, and saved the sheds from catching.

We might say, that no water was used on these sheds, and if your Roofing had not been fire-proof, they certainly would have burned.

We assure you, that you do not exaggerate the quality of your goods, and Brantford Roofing, has been to us, all you claimed for it.

WAS.

Yours faithfully,
TRENTON COOPERAGE MILLS LIMITED

There's a satisfaction in a perfectly painted house similar to when one's body is protected by good stout clothing, rain-coat, top-coat and sturdy boots.

The protection afforded property after the paint coating is worn down to the bare wood is no greater than garments worn down to the lining.

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100% Pure

protects your property so that it emerges from winter as hardy, rugged and strong as it entered. Quality does it. It withstands the rigors of winter storms, tempests, rapid changes of temperature, humidity and the disintegrating effects of sun, wind, cold, rain, hail and snow. Everything that *counts* is put *in*—Everything *that doesn't is left out*. That's why the quality lasts.

If your dealer cannot supply you, notify us and we will gladly direct you to where our paints are to be had.

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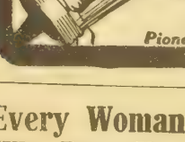

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The PUBLISHER'S DESK.

HOME SEEKERS—The Grand Trunk Railway are planning excursions to the Canadian North West These have been christened Home Seekers' Excursions and bring to mind the thought that there are thousands of new homes yet to be found in this ever-growing country-particularly along the line of the Grand Trunk Pacific. The Grand Trunk Pacific has acquired sufficient land to make nearly 100 town sites between Winnipeg and Edmonton. The lots are now placed on the market for sale, and are being rapidly picked up. Since last September between Winnipeg and Edmonton, the G. T. P. have been operating passengers and freight service. This is a distance of 703 miles, and all along the line there are villages and towns springing up with surprising activity There are four or five divisional points within this mileage that are showing marked development, and would well engage the special attention of those seeking a home or an improvement of their financial conditions. These excursions will be run on April 5th, 19th, May 3, 17, 31, June 14, 28, July 12, 26, August 9, 23, September 6, 20. Good for return within two months of date of issue. Other and full particulars may be obtained on application to J. Quinlan, District Passenger Agent, Montreal, or any other G. T. Representative

FARMING, RANCHING AND SOCIAL CONDITIONS IN WESTERN CANADA.—The Grand Trunk Pacific Railway have just issued a new and interesting publication, entitled "Farming, Ranching and Social Conditions in Western Canada" This publication contains a series of articles written by practical men on subjects of interest to those looking to better their present condition. The authors of the articles appearing in this book are such men as Mr Chauncey P Reynolds, editor of "The Prairie Farmer" Chicago and Fell llow at Michigan Agricultural College, Professor Thomas Shaw, Member of the Faculty of the Minnesota Experimental Station and Agricultural College, Mr. Phillip Eastman editor of the Capper publications, comprising a number of Kansas farming papers, Mr. R. S. Bayard, editor of the "National Stockman and Farmer", Pittsburg, Pen., and authority on beef and dairy cattle, Mr. Herbert Quick, editor "Farm and Fireside" Springfield, Ohio., and well known as an author and lecturer. Professor E E. Eaville, formerly professor of Agricultural Department, Iowa State College, Ames, Iowa These articles are written in an unbiased vein and from personal experiences and are most interesting to those who are desirous of learning more of Western Canada Copies may be secured on application to the General Advertising Department, Grand Trunk Pacific Railway Montreal

HORSES' SKINS ARE TENDER IN THE EARLY SPRING.—Every successful farmer knows how highly important it is to have all of his work horses in working condition every day during spring and summer, the time when he needs them most. A difficult thing to do, it is admitted. In the early spring horses' skins blister and gall easily and badly; during the winter months they have become tender. In the summer, when the weather is aggravatingly hot and insects are bad their skins are apt to scald and chafe and become bitten. Owing to these conditions many an otherwise good horse is laid up when his services are most needed—most valuable. To provide against just such occurrences the foremost farmers of the country have discovered and provided themselves with the only sure-safe, quick remedy. Bickmore's Gall Cure Invaluable and convenient, it cures while the horse works Satisfactory—the hair grows in again of the original color. For quickly healing cows' sore, chafed or fly-bitten teats it certainly has no equal. Ninety thousand horsemen and dairymen who use it and keep it in their stables the year round, admit that for surface sores of horses, cattle and all other stock no other cure is so sure, so safe, so quick and so satisfactory. Try it for harness or saddle galls, chafe, rope burns, cuts, scratches, grease heel, etc. Absolutely guaranteed to heal or money cheerfully refunded by your dealer. Thousands of dealers sell Bickmore's Gall Cure. Ask yours for it or send 6c. postage for free sample box, and Bickmore's Horse Book—it's free, too. A practical, valuable horse book, every horse owner should have. Address Wingate Chemical Co., Ltd., Canadian Distributors, 801 Notre Dame St., W., Montreal, Canada.

MODERN METHODS FOLLOWED BY POTATO GROWERS ARE VERY PROFITABLE.—Some of the readers of this paper would be astonished if they knew how much money some potato growers are making by following modern methods of potato culture. Time and again up-to-date potato growers have demonstrated that a Potato Planter, as well as a Sprayer or Sorter, will pay for itself in a single season, and without using a large acreage either An interesting and valuable work on "Potato Culture" is issued by the Aspinwall Manufacturing Company. It is written by their President Mr. L. A. Aspinwall, who has devoted his entire life to the study of potato culture and the manufacture of implements for the economical handling of the crop. This work covers every point of profitable potato culture, and includes articles on preparation of soil, selection of seed, how deep to plant, distance apart to plant, harvesting the crop, profits per acre. This paper has arranged with the Aspinwall Manufacturing Company to supply the readers of this paper with free copies of Mr. Aspinwall's work. If you desire a copy, write either to their factory at Guelph, Ontario, or to their home office at Jackson, Mich., and mention the name of this paper, and a copy will be mailed you promptly. This company has also just perfected Broadcast and Orchard Attachments for their Four Row Sprayers, which will render these machines especially desirable to the general farmer. If you request it this company will be glad to mail you their catalogue along with Mr. Aspinwall's work on "Potato Culture."

...s handsome as the best iron fence at less than the cost of cheap wood

Here's a neat, strong, durable fence that will add to the appearance of the handsomest city lawn and is cheap enough, close enough and strong enough for the farm. The

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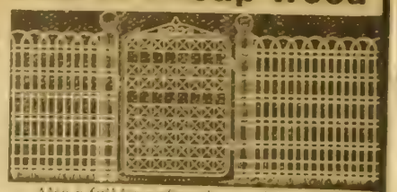
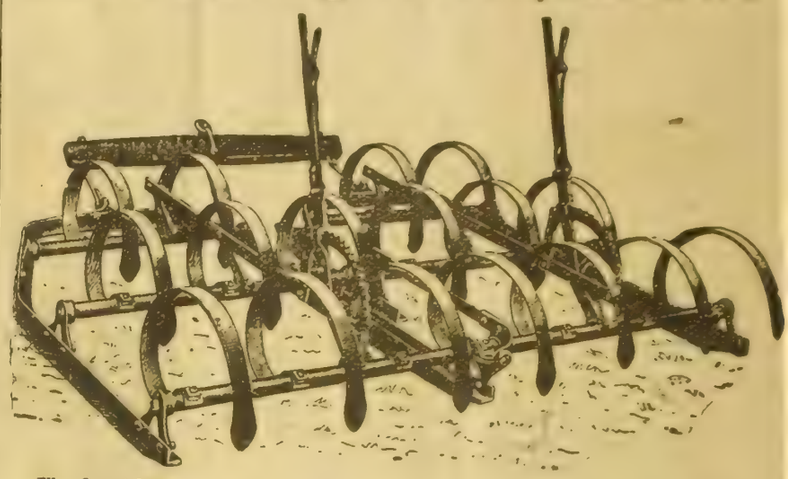


is made of heavy No. 9 steel spring wire, so it can never sag. It is carefully galvanized and coated with white enamel paint. No investment you can make will add so much to the appearance of your property.

Also a full line of poultry and farm fences and gates. Write for particulars.

THE BANWELL HOXIE WIRE FENCE CO., LTD., BOX K HAMILTON, ONT., WINNIPEG, MAN.

Lever Spring Tooth Harrows



The finest harrow made. Teeth can be adjusted in the field to any depth, and work regulated as required. Saves largely on labor and does more effective work than any harrow on the market. Highly recommended by progressive farmers who have them in use.

This cut shows teeth thrown up for dumping rubbish or for transportation. Made in sizes 11 tooth, one section; 15-tooth, two-section; 17-tooth, two-section; with 1 1-4" or 1 1-2" teeth. Made by

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The Best Offered. It Pays to Buy the Best.

Our Long Established Reputation the Best Guarantee You Can Get.

Our grades of Alsike and Red Clovers, also Timothy, have all passed government inspection and are all sold in sealed bags, under the provisions of the Seed Control Act. Our Regal Brands of Alsike, Red and Lucerne Clovers and Timothy are all No. 1 Government Standard and are unexcelled for cleanness and purity. We solicit your order, which will have the best of care. Prices here.

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	Per bushel, 60 lbs.
Alsike, Regal, No. 1, G. S.	$ 9.50
Alsike, Extra Choice, No. 2, G. S.	8.75
Alsike, Choice, No. 2, G. S.	8.00
Alsike, Prime, No. 2, G. S.	7.50
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Lucerne, Regal, Canadian, No. 1, G. S.	12.50
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White, Regal, No. 1, G. S.	18.00
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Blue Grass, Canadian Fancy	$1.75
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Our Beautifully Illustrated Catalogue of Vegetable, Flower and Root Seeds, Bulbs, Plants, Implements and Poultry Supplies—104 pages—mailed free to all applicants.

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SEED MERCHANTS. ESTABLISHED 60 YEARS.

THE MARITIME FARMER

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CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., May 10, 1910. Number 15.

The Use and Abuse of Lime in Agriculture.

"Lime and lime without manure
Makes both farm and farmer poor."

IN lime the farmer may find a most powerful agent for increasing the fertility of his lands. Indeed, some soils will do nothing without it. But on the other hand, if it be unwisely used, it may do almost irremediable harm.

Opinions and practice among practical men in regard to the use of lime vary very much. In some regions it is never used, while in others applications are made varying from sixteen cwt. up to two and even eight tons per acre.

Why this state of affairs should exist may be explained by a consideration of the many important parts which lime may play in the soil, and such a study will furnish guiding principles for individual practice.

Lime has very pronounced effects upon the physical condition of a soil. It cements grains of sand together by means of a porous cement and thus improves the texture and the waterholding powers of sandy soils. It corrodes the grains and thus makes the soil more finely grained. As the soil becomes finer in grain the surface exposed to the various solvents in the soil becomes greater at a very rapid rate, and thus plant foods are liberated more freely. In sandy soils lime will form capillary tubes running from the deeper portions of the soil up to the surface. This is a condition calling for more frequent cultivation, for unless these irregular tubes are broken off below the surface by hoe or harrow, water will feed up to the surface and evaporate, thereby cooling the surface and depleting the water supply. While if cultivation is thorough, the water saved will be supplied plentifully from the soil and sub-soil to the crop roots. Applied to clayey soils lime causes the excessively small particles to mass together in little balls, making the land more friable, more porous to air and water and warmer agriculturally. This "flocculation" of the soil particles increases the water and air holding power of the soil and the rate at which, under cultivation and drainage, the water and air may be renewed. One effect of this flocculation may be easily demonstrated. If two glass tumblers are filled with water in which some clay has been stirred, and if to one of these tumblers a few drops of lime water are added, the latter will settle in a few minutes, while the other may require a day or more to become clear. This effect of lime may be seen also in the soil's power by drainage. Through a tube fifteen centimetres long, filled with limed clay, water passed in one hour. Through a similar cylinder not limed it required two days for the same amount to pass. Limed clay will not puddle so easily as unlimed. In both clays and sands the lime flocculates much of the organic matters which may be present and unites with others, with the result that they do not drain out of the soil. If in limed and unlimed cylinders brown manure water be poured it will issue almost unchanged from the unlimed cylinder, but will be nearly clear after filtering through the other. What a difference this would make on an acre of land in the amount of manurial waste from a soil well limed compared with a soil lime-free, can easily be guessed. Lime therefore tends to make soils mellower, moister, more easily tilled and less wasteful.

A simple test for lime in a soil can be made by pouring on it some (muriatic acid (HCl) reduced to one-half the strength of the concentrated acid, and the amount of the frothing will roughly indicate the amount of lime present. The rate of settling and the power to retain manurial matters will also help to indicate whether the soil needs lime or not. If the soil, when moistened, shows acidity when touched with blue litmus paper (obtainable at any druggist's) by turning it red, it has been demonstrated that the soil needs lime, if the finest agricultural results are to be reached.

On the chemical condition of the soil the effects are as marked and as important as on the physical. It counteracts the acids, and so sweetens the soils. It sets free potash from the hard silicates of the soil grains, and this breaking down of the soil grains exposes the phosphates to the solvent activities of the soil water. If hurtful sulphates, such as Epsom salts and copperas (FeSO4), are present, it changes them to land plaster (CaSO4), and liberates the bases, such as soda and potash. It sets free the iron from the copperas, and helps it to oxidize to the helpful red rust. The lime quckens the rate of oxidation of iron and organic matter, and this adds to the warmth of the soil. By this action carbonic acid gas is produced, and this gas in solution has a pronounced solvent action upon the constituent particles of the soil.

The effects of lime upon the life of the soil is the chief matter of interest to a farmer, and is the result of the changes this powerful agent makes in the physical and chemical conditions. In fertilesoils there are the many varieties of bacteria which feed upon or produce various compounds in the soil, such as the iron and the sulphur bacteria which can feed upon the nitrogen of the air and the ammonia of manures, and change them into nitrous acid and the nitrates, and the nitric bacteria which adds more oxygen and change the nitrous acid to nitric acid and the nitrates. When the nitrate has been produced, we have nitrogenous food in the only form in which plants can make use of it, and which they must have if they are to grow. It will be seen therefore that the plant world depends for its food upon the bacterial world, just as the animal world depends on the plant world. One more class of bacteria should be mentioned, the dentrifying bacteria, the farmer's great enemies, which tend, in the lack of air, through poor cultivation and drainage, to undo the invaluable work of those just mentioned, in reducing the nitrates to ammonia and free nitrogen. They are doing their wasteful work when a manure pile is found giving off odors of ammonia.

Each kind of bacteria, like other forms of life, are killed by their own products, and therefore the acccumulation of nitric acid and other acids in the soil checks the important work of the nitrous and nitric bacteria. Lime will unite with these acids and counteract their effects. The bacteria then resume their activity.

It has been found that our leguminous or podded plants, such as clover, peas, beans, vetches, etc., are dependent in a very intimate way upon the bacteria. These are found in the nodules on their roots. By means of this association with the bacteria, this class of plants are able to build exceptionally large amounts of nitrogenous matter into their structure. They are also rich in potash. On account of this nitrogen richness, the clovers, etc., have become the hope of agriculture, for the world's supply of nitrates is running low. But the farmer who can so arrange his rotations of crops that once in four or five years he shall be able to plow under a mat of clover eight inches high, which in this climate he can get as an aftermath, will not lack nitrates enough for bumper crops. In sour and limeless soils his clover will not grow. The reason, therefore, is plain why lime, gypsum, basic slag (40 per cent. lime) and potash have so great a power to produce fine stands of clover. Sometimes on the other hand, the plowing under green crops may in their decay produce acid conditions even in well-drained and thoroughly cultivated soils which lime will correct. When however, the acidity has been corrected, the rate of decay, the rate of nitrification, the bacterial population of the soil and the warmth will all show an increase. Lime in a compost, will, for the same reasons, hasten its decay and ensure its more thorough nitrification and, therefore, its power to stimulate the growth of crops.

The conditions favorable to nitrification, on which all agriculture depends, especially if first class results are to be obtained, are moisture, humus, air, darkness, and lime or other alkali. Lime, therefore, is one essential in a set of conditions of which cultivation, drainage, and the plowing under of green crops, or the application of barnyard manure, can supply the rest. When clovers are plowed under, besides the large amount of nitrogenous matter they contain, if the stand is in its second year, the roots have penetrated to the subsoil, from which they have brought up notable quantities of potash and phosphate. These essential fertilizing elements are by plowing added to the available supply in the soil, where they nourish the bacterial life, and thus the succeeding crop to which they give healthy growth, stoutness and bulk, while the nitrogenous matters produce rapidity of growth and rankness.

Commonly we say that lime is not a fertilizer, but an ameliorant, that is, a substance which produces in the soil conditions favorable to the action of the phosphates and potash, and therefore to the growth of the plants. It must not be thought, however, that lime plays no part in the tissues of the plants. It helps the movement of sap. It counteracts some acids formed in the tissues which are poisonous to the plants. Without lime and iron the green matter of the leaves cannot be formed. In the cells, which are the only living part of plants, lime is found in the nucleus. When ripening begins lime retreats from the seeds to the leaves, while the phosphates go in the other direction. Science will probably have more to say in the future of the role which lime, iron and magnesia play in the growth, but through as fertilizers they are important and essential, their functions are very subordinate when compared with those of potash, the phosphates and nitrates. Besides, with exceptions of the lime, ordinary soils contain a sufficient quantity of these elements. It is well, too, when men can produce the surprising results possible through the use of lime, to remind them of the somewhat subordinate place lime occupies as a plant food.

Lime applied to soil kills out grubs, fungi, and all growths which swarm on sour soils. Sorrels and mosses go, and clover and the finer

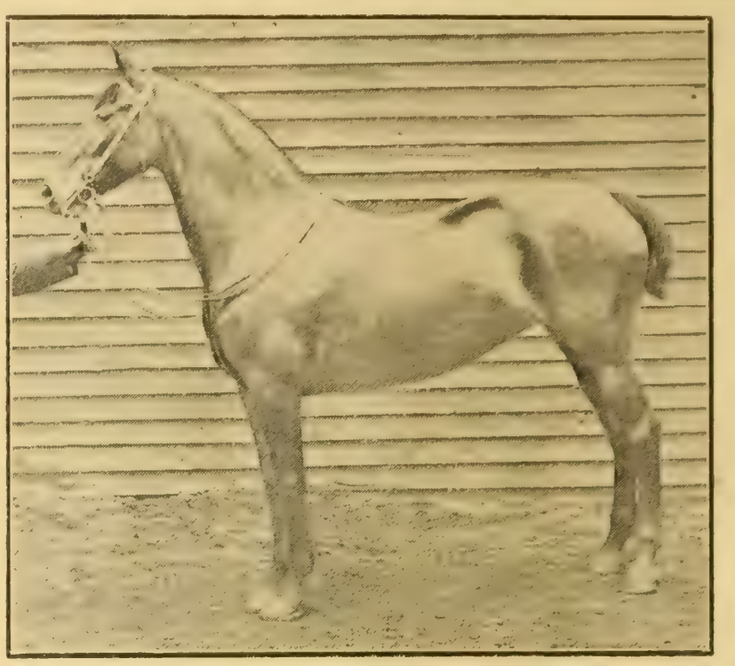
grasses come in. A dressing of lime, applied early in the spring, and harrowed in, has a very marked effect in checking the cut worm. The mature worm will crawl through lime, but when immature it has not the protection of the thick skin in which he rejoices when full grown. Club root in turnips and cabbages is markedly checked by the use of lime. The writer had one experience which may be of value to some others. Some cabbage plants were taken from a garden, in which club root was common to a new garden. In midsummer, one after another of the cabbage began to wilt down when the sun was hot, and there was little hope of saving any. A mixture of iron filings from the foundry and lime thrown on the surface of the soil close to the plants was tried, with the result that the spread of the disease was checked, and only four heads in a hundred were lost. When the cabbages were harvested they were of good size and quality, but not one was found which had not through disease, lost its main root, and near the surface, under the iron and lime were mats of fine roots, which had carried the crop through.

Some plants are especially benefitted by the use of lime. Apple trees, and cedars, and oaks are lime-loving trees. Clovers, sugar beets, and mangolds, tomatoes, lettuce and wheat respond well to applications of lime. It will benefit potatoes, but unfortunately, the scab, which thrives in alkaline conditions is also favored. A thick, green sod, plowed under, or a good application of black muck, will furnish acid enough to discourage the growth of the scab.

Very valuable composts may be made of clay, green sods, waste hays, grasses, and weeds, with the addition of lime. Tansy, ferns, and brakes, sedge, and cat tail are all rich in potash, and if easily obtained, are valuable constituents of a compost. With some provision for ventilation (to prevent denitrification) by forking over or by laying a few drain tiles or brush into the centre of the mass, the ripening of the compost will be very rapid. The result will be a mass rich in humus and nitrates, and potash from the clay and the air and the green growths. If basic slag phosphate be added, it will be rendered soluble, and the mass will form a complete manure of finest quality. Generally, however, a man's fields should be his composts.

Mulches made of cheap hays and grasses and weeds supply all the conditions for rapid formation of nitrates, viz., air, shade, moisture, organic matter and mineral salts. If lime be added the process becomes more rapid and at the same time slugs and field mice are driven away. For apples and raspberries and other fruits this is all the fertilizer required for potash, lime, phosphate and a good supply of nitrates will be supplied. The mulch will prevent grass from growing close to trees and will retain the moisture of the soil.

Experiments conducted by the writer show the effect of lime on a piece of worn out tidal marsh land, which had not been tided for 150 years and had yielded no good crop for many years. Some of the land grew weeds, short brown top and hard hacks, and the rest was blue mud growing a poor quality of broad leaf hay. Three casks of lime, 100 lbs. of muriate of potash, and 400 lbs. of basic slag phosphate were applied per acre. On the adjoining section of land was sown without any fertilizer. All the land had just been underdrained. The oats yielded 94 bushels on two acres, while 70 bushels was harvested from the neighboring plot, which was sown a week earlier and which lies nearer the creek. The surprising difference in the oat crop was hardly as marked as the difference between the clovers and timothy on the fertilized area and the non-fertilized plots. In the latter they are scarce, about two inches high, while on the fertilized strip they are abundant, six, seven and eight inches high. In some places the timothy was found in



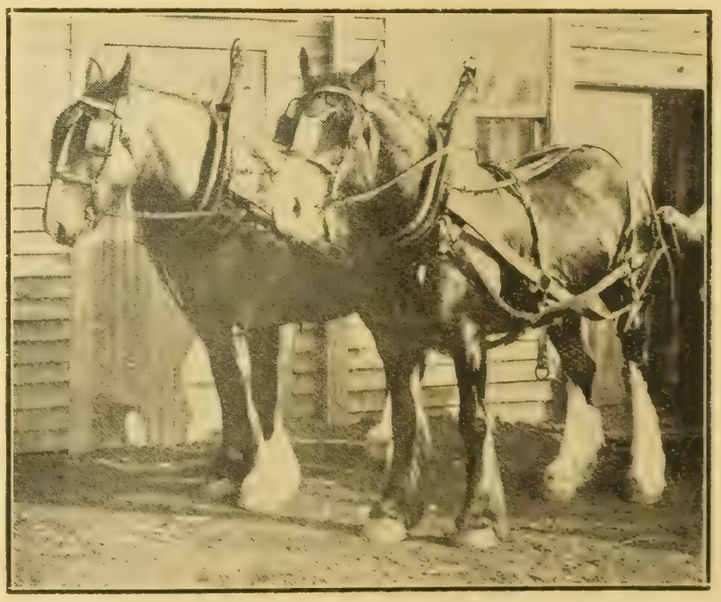
Banker.

One of Mr. McAvitys high stepping prize winners at the Maritime Horse Show.

head. This was a soil in which the use of fertilizers without lime would have had scarcely any effect, so sodden, sour and poisonous was the soil. With lime at $1.50 per cask, nitrate of Potash (KCl.) at $50, per ton, and basic slag at $19.00 per ton, the cost of application may be easily calculated, and it may be regarded as a fair amount to add to grass lands. The addition of nitrates would stimulate more rapid growth, but would add considerably to the cost and would tend to injuriously affect the growth of the clovers. The elements included above may be counted on to produce a good effect in the land for several years. One large plot of land which has been kept under observation shows the effect of one such application after eight years.

In well sweetened soils, not deficient in potash and phosphate clovers grow well, and on the plowing under of these and other sods, aided by thorough cultivation and drainage, the farmer should depend for his nitrogen rather than on the costly commercial nitrates. It has not yet been proved that on the tidal marsh lands the addition of any other eements besides the lime is absolutely needed. The good effects of lime are apparent every time when applied to the sour marsh, and there are cases where one application has shown good effects for forty years afterwards. Nitrates and sulphates are not required on these lands. Every piece of poor marsh the writer has tested has been sour enough to turn litmus paper red.

The excessive use of lime may make a soil too open, so the plants will not root well. The caustic effect may kill out valuable bacteria and in rich soils, especially if they are not thoroughly cultivated, it may cause the nitrogen to escape as ammonia. The danger of harm in these directions is not so very great in comparison with the one now to be emphasized. One old saying is that "Lime enriches the father and beggars the son." Why?



A Pair of Prize Winning Clydesdale Mares.

Owned by Logan Bros., Amherst Point, N. S.

When a farmer uses the lime as a stimulant without supporting it by adding other fertilizers, he increases the bacterial activity, the oxidations in the soil, and this leads to a rapid destruction of the humus or carbonaceous constituent in his soil. When this is gone, the fuel which supports soil activities, such as the dissolving out and the elaboration of plant foods is gone. In ordinary Canadian soil there is enough phosphate, nitrogen and potash to suuport continuous cropping, without the addition of fertilizers, for two hundred years, but these elements are locked up in the rocklets which compose the soil. Phosphate in the heart of a grain of sand is useless to a plant as if buried in the core of a mountain. Before the plants can be fed the soil grains must be dissolved by the acids produced by bacteria, by chemaical oxidations such as nitric and carbonic acids, by the action of lime, which corrodes the soil grains and aids the rusting of the iron in the soil, by the power of oxide of iron to act as a carrier of oxygen, as do the iron compounds in our blood, and by the movements and solution changes produced by the air and water in the soil. These activities are reduced to a minimum when the humus is gone. The foolish use of lime with the resulting rapid destruction of humus soon leads, especially if it be a red soil, that is, one rich in iron, to what is called a "worn out soil." But in most cases the humus only has failed. The soil itself is good for thousands of years, for when by the forces kept at work by good cultivation of the soil the grains of the upper layer of soil are dissoled away, the farmer is down to the second layer as rich as the first. He who burns a fierce fire gets great results, but he must stand to feed his furnace all the more liberally. By the use of lime, the farmer may greatly accelerate the work done in his soils. He practically lengthens his season, and by the abundant use of the carbonaceous matter of barnyard manure, swamp muck, and of plowed under clovers, vetches, peas, rape and buckwheat, no harm can come to his land. In many parts of the county there are black muck areas which are most valuable, as they are large stores of almost pure humus, which as top dressing, as an absorbent in stables, as an addition to composts and as soils for intensive cultivation are by no means adequately appreciated. Those sour black soils cannot be worn out by any use of lime. The only harm that could come would be a temporary injury to bacterial growth through an excessive application at one time, but on such soils even this is difficult.

The whole warning necessary may be sufficiently emphasized by repeating in another form the farmers proverb at the head of this paper.

Forever liming without humus
Will bring the farmer to the poor-house.

—By Dr. W. W. Andrews, Sackville, N. B., in N. S. Agricultural Report for 1909.

Every Farm Boy and Girl Should Compete.

Editor Maritime Farmer:—

A gentleman who has offered substantial special prizes for the best essay on farm weeds and for the best collection of pressed and mounted weeds, open to farm boys and girls, to be competed for at one of the fall fairs, has asked me to prepare a scorecard for judging these exhibits, the card to be known to the competitors in advance.

I send you herewith copies of the scorecards which I have had prepared, and should be glad to have any comments which you may see fit to make with a view to improve

them. You may observe that these cards are prepared with a view to restrict, so far as practicable, whatever advantage a boy or girl who has attended high school may have over the boy or girl who has not.

GEO. H. CLARK,
Seed Commissioner.

SCORE CARD FOR JUDGING COLLECTION OF PRESSED AND MOUNTED WEEDS.

(For competition among farm boys and girls.)

1. Specimens that are the most representative of the weeds that are troublesome in the country (not more than 50)..... 25

2. Classification into groups, according to the kind or kinds of crop in which it gives trouble, as follows, (a) grain crops, (b) clover crops, (c) meadow or pasture lands, (d) hoed crops 25

3. Each specimen should be mounted to illustrate its habit of growth and means of natural reproduction and distribution, as may be observed by the following characters of the weed. 30
   a. Roots.
   b. Stem and branching.
   c. Leaves.
   d. Flowers.
   e. Fruits (seed pods, capsules, etc.)
   f. Seeds, in bottles or gummed to paper.

4. General appearance of collection and correct information written at the bottom right hand corner of each sheet of paper to which the pressed specimen is attached, as follows:— 20
   a. Common name of the weed.
   b. Annual, biennial or perennial.
   c. Place (as name of road or farm) and date of collecting.
   d. Nature of soil and locality (as open field, ravine, etc.)
   e. Name of collector.

SCORE CARD FOR ESSAY ON FARM WEEDS.

(1200 words allowed.)

(For competition among farm boys and girls.)

Evidence of personal experience and observation on the part of the candidate of the following points.

1. (200 words allowed) Habits of growth and natural means of perpetuating its kind to be illustrated by referring to particular kinds (common names to be given) of 15
   (a) Annual or one year weeds 5
   (b) Biennial or two year weeds 4
   (c) Perennials or many year weeds 6

2. (400 words allowed) Methods of suppressing particular kinds of weeds common in the district, including, ... 30
   (a) Trial methods made by candidate and the results 15
   (b) Observations of the methods adopted by others and the results, ...15

3. (100 words allowed) Instances of how weeds have been introduced into your county..... 10

4. (300 words allowed) Instances of how weeds are distributed 15
   (a) Within a field..... 5
   (b) From field to field.....5
   (c) From district to district...5

5. (100 words allowed) Comments on losses due to farm weeds 10

6. (100 words allowed) Suggestions as to legislation to control or suppress weed growth within a municipality 10

For logical arrangement of matter 10
choice expression of thought,
correct spelling and punctuation.

Better Roads.

Editor Maritime Farmer:—

Is there any question that is of such vital importance to every live farmer as the construction and maintenance of good wagon roads.

The farmer may gather a most bountiful harvest and yet fail to realize a profit thereon owing to the fact that the bad condition of the highways prevents him from marketing to advantage.

In these days of small margins, the farmer in order to make his vocation a lucrative one, must learn to watch the markets closely and sell the products of his farm when the prices are best. In order to do this he should have highways that, no matter whether it be March or September, June or December, will always be in good condition for the transportation of heavy loads.

Of all the economic questions effecting the welfare of the farmer and every good citizen, there is none of greater importance than the construction and maintenance of good highways, over which they may pass to and fro in their commercial and social relations with one another.

How often do we hear farmers discussing the financial situation, declaiming loudly against "corners" in the market, denouncing monopolies, combines, or demanding the government to do this or that, seemingly forgetting that they themselves are a part of that government, that they are as much to blame and that right at home they uphold bad laws and shirk their duty in regard to even these. Where is the intelligent thinking farmer, who has given the subject the proper thought, who can deny the fact that many of our common road in Nova Scotia are in a deplorable condition, and that there is need of reform in the manner of collecting and expending our highway taxes.

We are told that our highway laws are patterned after those in vogue in the federal days, when, as one of their various duties, the tenants were obliged to build and repair the highways. Wherever it originated, our present system of constructing and maintaining highways is common in all parts of America, and is a disgrace to our country and the intellegence of the nineteenth century.

Some of the European countries, France, England and Scotland among the number, are now blessed with fine highways of which they are justly proud. But history tells us England was cursed with bad roads such as we find in many parts of our country today. It tells us that it was about the middle of the seventeenth century that an agitation was first started which forced her to repeal her defective highway laws, and perfect the system which they are so justly proud of today. About the latter part of tne 17th century nearly five hundred highway laws were enacted without much improvement. Finally a general law was enacted to collect all road moneys and have it laid out by competent parties and from that time the roads of England steadily improved until now Macadamized roads extend from one end of the country to the other.

Yet we today struggle along with the inefficient highways laws that England discarded over one hundred years ago. Each county in Nova Scotia is divided into so many polling districts, and each polling district has so many road districts, an overseer is appointed yearly by the County Council to look after one district, and is supposed to be held responsible for the condition of the roads under his care, and in ninty-nine cases out of one hundred, the overseer lacks the technical skill and knowledge of road-building that such an officer should possess.

Every male sixteen years of age and over is assessed according to his income, or property owned, no difference is made whether the roads in a certain district, or in one part of a certain district, is clay, sand or gravel, the assessment is all the same. The law says this work must be done between the 18th of May and the 15th of October.

Usually, about the first of June, the overseer warns out the men and teams to come on a certain day, and for a few days does his best to makes the roads worse if anything, than they had previously been. Thus, after wallowing through mud all the spring, just when the roads are getting passable, they are attacked by unskilled crews under incompetent bosses and are plowed and dug up and filled with stone, mud and loose earth, while drainage is usually ignored entirely.

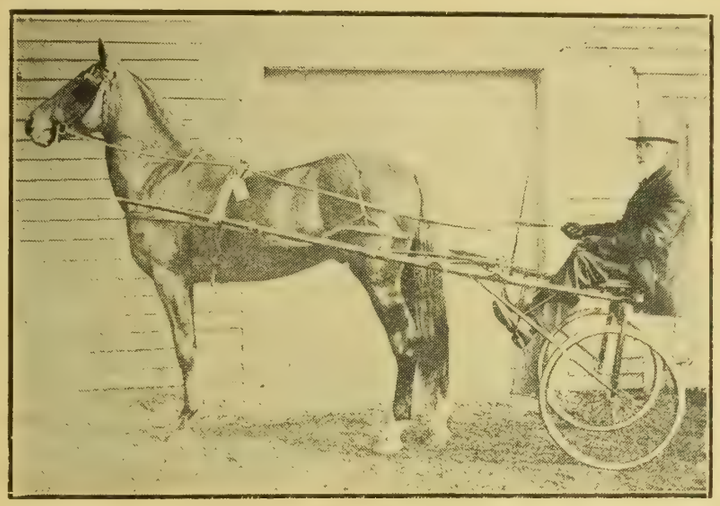
In most road districts now, are owned road machines, good implements in the hands of good bosses—but in many instances they have done more harm than good. In certain sections, roads are built up from the material at hand, then gravel is drawn, often long distances, costing from fifty to eighty cents per two horse load. Along comes a new overseer with six or eight horses attached to a road machine and runs it from one end of his section to the other, drawing dirt, stones and rubbish of all sorts in the centre of the road covering up the gravel. The first heavy rain that comes turns those "improvements" into quagmires, and in the latter part of June the farmer who is obliged to use the roads is seen picking his way slowly along while the wheels of his wagon go down, down, through the "improvements" until they reach the gravel that has not been disturbed by the "road-makers."

July's hot sun drys the artificial quagmires, and soon deep ruts and high bumps are formed, over which it is extremely unpleasant and unprofitable as well, to ride.

Railroad companies have men constantly at work on their tracks, keeping them in thorough repair, but the wagon road has no one to care for it—no mud hole is filled, no hummock is leveled, and when another June comes around the road is generally in a wretched condition. Nothing daunted, the new overseer orders out his crew, more mud is piled on the road, or gravel is hauled, still neglecting to properly grade or drain. As a consequence new ruts and hummocks appear; and thus the waste of labor and money goes on year after year with little or no improvement.

Before railroads were built our main coach roads or "post roads", as they were called, which ran from one market centre, or town to another, were kept in good shape at all times and were a powerful factor in the development of our resources. Now these roads, are, in many places, more especially in out lying districts a disgrace to the country.

The question many intelligent men are now asking, is it not time for a change of some kind after hundreds of years of failure? And the same men if they dare express their views openly will be disliked by the timid and lazy who fear the trouble and dangers of a change; they will be fought by those who are satisfied with the old though evil way; and they will receive little support from men, if they dare express their views isting evils, because the remedies that they recommend will not act as a charm and instantly remove the ills. A. HECTOR CUTTEN.



Baron Wood by Oakley Baron.
A worthy son of a worthy sire Exhibited at the Maritime Horse Show by W. S. McKie, Charlottetown, P. E. I

In the Shade of the Tall Timbers.
A Prince Edward Island Pastorial Scene.

Heredity in Plants and It's Bearing on Agricultural Problems.

(Prof. C. A. Zavitz, O. A. C. Guelph.)

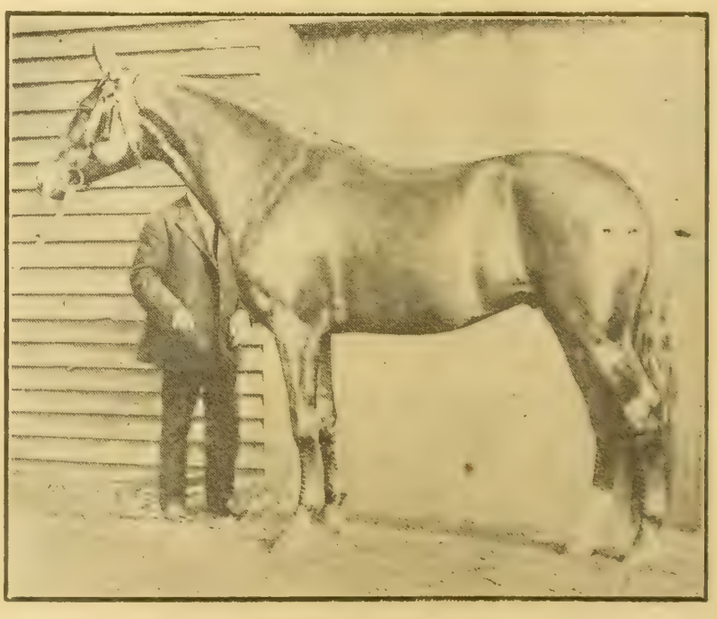
Heredity may be described as the transmission of parental characteristics to the offspring. The laws of heredity in the plant world appear to be very similar to those in the animal world. Heredity in plants, therefore, is at the very basis of plant life and consequently has a close relationship either directly or indirectly with the whole fabric of agriculture. It will be seen at the start that the subject which I have been asked to present is one dealing with some of the deepest problems of life and their relationship to the economic world. Some of the greatest scientists of the present day, such as, DeVries in Holland, Bateson in England, and Davenport at the Carnegie Institute are making the study of heredity their life work; and other men af note, such as Burbank in California, the Garton Bros. in England, Nilsson in Sweden, Drs. Wm. and C. E. Saunders in Canada, Biffen of Cambridge, Webber of Cornell University, and Groff of Ontario are working along the more practical lines of heredity as they apply to plant production. There has probably been no time in the world's history in which a greater number of men have been working or a greater interest manifested in the study of heredity than at the present time. The scientific investigations of Darwin and Mendel, and Devries and Galton and Weismann and Bateson, and of many others show us that, although great advances have been made in our knowledge of the laws of heredity, there are scarcely any of these leading scientists who will accept the conclusions of the others. While it is true that our knowledge of heredity is yet quite limited, it is also true that the advancement made during the last few years has been really wonderful. It is probably safe to say that no man in the past has exerted a greater influence in the scientific study of heredity than Gregor Mendel. At the present time, Mendelism has very strong supporters and also very severe critics. It is undoubtedly true that the Mendelian law of theory of heredity is still and will be for some time to come, the foundation of the scientific research regarding the laws of heredity. The work of Mendel has greatly changed the standpoint of investigation and has greatly altered the methods of research regarding the underlying principles of heredity in both plants and animals. Gregor Mendel was an Austrian monk who made very accurate observations of his prolonged experiments with peas. The reports of his observations were prepared and read at meetings in Austria in 1865, after which they were evidently lost sight of until they were rediscovered in the year 1900. During the last ten years, these results have been very carefully studied, and they form the basis of investigations in various parts of the world. The essential point which Mendel discovered is that, though a plant or an animal may be made up of a great many characters, those characters may possess an individuality manifested in the formation of the germ-cells. A hybrid when it comes to make its own germ-cells, either male or female, makes them in such a way that each germ-cell represents one of the pure, grand parental characters and not both; consequently, plant breeders of the present time not only study the individual plants, but look more particularly to the various characters which make up the plant as the units of heredity.

Men deeply interested in the improvement of plants and especially of those of economic value in agriculture and in horticulture are not only making a study of plant breeding themselves, but are watching the results of scientific investigations in various parts of the world, in order to secure information which will help them in securing the desired results. It is scarcely necessary to state that there are but few men who have made a searching study in the laws of heredity and at the same time who are making as deep a study of the applications of those laws in meeting the needs of the people, in the work of plant improvement. During recent years, however, a few men are endeavoring to make a practical application to our common farm crops of some of the best scientific knowledge which they can secure. In order to get the best practical results from a study of heredity in plants in its relation to agricultural production, it seems necessary to first make a thorough study of existing varieties and to then endeavor to improve the best through selection and through cross-fertilization, in order to secure those improvements which are best suited to the conditions for which they are desired. I would therefore, recommend most strongly to the scientific plant breeder and also to the practical farmer the importance of making a very careful study of the existing varieties most suitable for his purpose. That the force of heredity is great, can be seen by a study of individual varieties over several years. Allow me to draw your attention to two samples which will show the influence here referred to.

The introduction, the spread, and the value of the Red Fife variety of spring wheat in Canada show, to a marked degree, the influence of heredity and its bearing on agriculture. It is stated that in 1842, an Ontario farmer, by the name of David Fife, received from a friend of his in Scotland a little package of wheat which was taken from a cargo which had just arrived from Dantzic on the Baltic Sea. Mr. Fife sowed the wheat in the spring of 1842, but it proved to be a fall wheat and only one plant ripened. The seed of this plant was sown in the following year and the crop grew and ripened well. This wheat was increased from year to year until it is now the most extensively grown variety of spring wheat in Canada. It is this variety which is closely connected with the great reputation which Canada has obtained from its production of the No. 1 hard wheat of the Western Provinces. It probably forms the basis of more plant breeding in wheat in Canada and in the Northern States than any other single variety.

Lady Sim.
First in the Roadsters in Harness class at the Maritime Horse Show. Owned and driven by Mrs. Fred Blenkhorn, Maccan, N. S.

The history of the Dawson's Golden Chaff winter wheat is also interesting in showing the power of heredity, the importance of variety, and the results of careful observation. In 1881, Mr. Robt. Dawson, a farmer in the western part of Ontario, had a field of the old White Clawson variety. The crop was very badly lodged, but one plant was found in the field by Mr. Dawson which was upright in growth and handsome in appearance. Mr. Dawson selected this plant, and from it started what has become well known as the Dawson's Golden Chaff winter wheat. This winter wheat is now grown more extensively than any other variety in the province of Ontario. The crop retains its former good qualities of stiffness of straw, of the power to give a large yield of grain, and of its red chaffed beardless heads which contain comparatively short thick grains which are white in color.



King Dodds.
A winner at the Maritime Horse Show. First in Standard Bred Stallions' class. First in Roadster Stallions' and Champion. Owned by Dodd Dwyer, Pictou, N. S.

This last example goes to show the importance of selection. Plant selection can be conducted in different ways. The method here illustrated was very simple and also very effectual. For plant selection in a more extensive way, one of the three following methods is usually adopted.

1.—By making a composit collection of the most promising plants in the field.

2.—By making a collection of the individual plants in the fields which most closely comply with the ideal, in the mind of the plant breeder.

3.—By the use of the nursery plot, where a large number of seeds are planted at equal distances apart, and from which individual plants are selected from those which have had equal advantages of growth and development.

In the former method, the seeds of the different plants are sown collectively, while in the latter two methods the seeds from the individual plants are planted and studied separately. While the principal work of the Canadian Seed Growers' Association has been along the line of the first mentioned method, any one of the three methods here referred to may be used as the foundation work by the members of the Association according to their desire. Those persons most deeply interested in the systematic work of seed selection usually adopt either the second or the third method, or both of these methods. At the Ontario Agricultural College both the last two methods have been in use, and some very interesting results have been obtained in securing improved strains of some of the leading varieties of farm crops, such as Dawson's Golden Chaff winter wheat, Red Fife spring wheat, Mandscheuri barley, Siberian Millet, etc.

In order to illustrate what has been done in this line, I wish to refer to what is known in Ontario as the O. A. C. Number 21 barley. In the spring of 1903, 9,972 selected seeds of the Mandscheuri barley were planted by hand at equal distances apart in the Experimental department at the College. When the plants were ripe they were carefully examined, and thirty-three of the most promising ones were selected, harvested and threshed separately. In 1904, 33 separate lots of barley were grown from the plants selected in the year previous. From that time forward only the best strains were grown in the tests as follows:—14 in 1905, 8 in 1906, 7 in 1908, 3 in 1909. In one instance, over forty bushels of barley were grown in 1905 as the product of one seed planted in the spring of 1903. Of all the selected strains the one which is known as the O. A. C. No. 21 has made the best record. In each of the last three years, it has given better results than the Mandscheuri variety in yield of grain, in freedom from rust, and in both length and strength of straw in the co-operative tests throughout Ontario. The grain is quite easily distinguished from that of the Mandscheuri variety.

Ever though much care is taken in the systematic selection of farm crops, we find that the best strains of the best varieties do not always possess a combination of all the most desirable characteristics. The work of cross-fertilization enables certain combinations which it seems exceedingly difficult to secure in any other way. At the Ontario Agricultural College, we have done a considerable amount of work in cross-

fertilization with our leading varieties of winter wheat, spring wheat, oats, barley and peas within the past eight years. In 1909, we had upwards of 100,000 hybrid plants grown separately. The results are very promising. May I state that within the last two years we have secured from small plots of our hybrids higher yields of grain per acre than those obtained from the leading varieties of oats, winter wheat and spring wheat. Some of the thinnest hulled and the most beautiful oats which I have ever seen are those obtained from one of our hybrids.

I believe that there was never a time in which there were such great opportunities for excellent work in plant breeding, either from a scientific or from a practical standpoint as the present. Within the next few years there is sure to be a much clearer conception regarding the laws of heredity, and a more widespread application of those principles of crop production.

Report of the Swine Commission.

Our readers will remember that early in 1909 the Dominion Government sent a commission consisting of J. B. Spencer, Assistant Live Stock Commissioner; W. W. Ballantyne, Stratford, Ont.; Wm. Jone, Zenda, Ont.; J. E. Sinclair, of Prince Edward Island; Gideon Garceau, Quebec and Joseph Rye, representing the Western Provinces, to Europe to investigate the methods by which swine are reared for the production of bacon. We have just received a copy of their report.

The Commission sailed from Montreal on June 18th, arriving in London on the 27th. The three following days were spent in gathering information in respect to Canadian and Danish bacon, and the trade in these products. They arrived in Denmark on July 2nd, and until the 16th, followed the itinerary mapped out by the Department of Agriculture in charge of Mr. P. A. Morkeberg, Live Stock Commissioner for swine and Red Danish cattle, who acted as guide and interpreter. Returning by way of Germany and Holland, a day was spent with advantage in a Dutch bacon curing and hog raising centre. Upon returning to Great Britain, Scotland received attention first, then Ireland and last England. In addition to studying swine-rearing as a commercial work, the Commission visited prominent herds of pure bred stock, and such leading agricultural exhibitions as the "Highland" of Scotland, and the "Royal Lancashire" of England. The Commission was well received everywhere.

The time was evidently spent chiefly amongst successful breeders and feeders. The section dealing with farms of feeders visited in England is most interesting, It is shown how a very general feeling of sympathy between farmers and bacon curers has been brought about and maintained. On this point the report says:—

This comfortable and very profitable state of affairs is the result of harmonious co-operation instituted largely by the packers, who, conscious of their entire dependence on the supplies and condition of hogs. have done much to encourage production of the right sort. Messrs. Harris & Co. have interested themselves in cheapening production, but in all they have done have never lost sight of quality. Some years ago they made careful tests of breeds and crosses of pigs and after determining the superiority of the Yorkshire cross undertook to supply boars of this breed at the lowest possible cost and on easy terms of paymest. The next step was to encourage the production in quantity and quality of pigs. To accomplish thia the Wilts County Council was induced to take up a series of pig feeding experiments and demonstrations in cheap production. A committee of ten members, consisting chiefly of farmers, was formed. Contributions to carry on the work were made by Lord Lansdowne, whose estate joins Calen, the Harris Company and the County Council. A thoroughly capable and painstaking secretary was appointed to keep records, while a son of one of the leading farmers was entrusted with the actual feeding. The tests and demonstrations were carried on for five years, after which time the secretary and scientific adviser gave courses of lectures throughout the country and distributed reports.

The methods of feeding practised in the district referred to are fully described. In another section of England the report explains that a grievance between growers and buyers was overcome by farmers co-operating in the engaging of a general salesman.

After covering in a thorough way the various phases of the industry in Ireland, the report briefly reviews the sit ation in part as follows :

The rearing or swine is a popular branch of Irish agriculture. Nowhere throughout the rural districts do the people despise the pig Both extensive farmers and the more humble of the rural classes find it profitable to raise at least a small number of pigs each year. The frugal habits of the Irish peasant admit of no food refuse or damaged crops being wasted. The careful feeding of these, together with a greater or less quantity of purchased food stuffs materially helps to maintain many a small holding. The 'gentleman that pays the rent', the pig means much more amongst the frugal Irish folk than perhaps any other class or race of people.

The proximity of Ireland to the British market has for very many years proved a keen impetus to pork production. The great manufacturing centres of England require constant supplies of pork products. Irish packers and English merchants have long since come to regard each as indispensable to the other. The Irish packer has been wise in his day and generation. Not all the pork he ships bears his most cherished brand. Much Irish pork, such as that from old breeding stock, over fat hogs, and those that are too thin, are sold without identification, but no business man guards with keener jealousy the reputation of his special brands of bacon and ham than the Irish curer. From the great mass of supplies he selects most carefully the the pigs that are to be cured for the best trade. The cureing is done with equal care, and at the end of this stage only the firm sides and the lean plump hams receive the first brand. On this kind of combination Irish bacon has established itself in Britain, and on a continuation of this the trade won is held.

The Irish farmer inclines to follow a leader in whom he has confidence. This characteristic of the people is of great assistance to the Department of Agriculture in its work in aid of swine improvement. Already this has helped the quality of Irish pigs. Co-operation, too, finds a receptive soil under such conditions. This is getting a foothold in many parts of Ireland not so much in bacon curing as yet, but in the buying of supplies needed in the homes and on the farms, and the marketing of farm produce. Co-operative curing has commenced and will grow to the undoubted advantage of the Irish pig raiser, more especially in the direction of producing "Wiltshire" sides for the British market.

Leading up to the swine rearing industry of Denmark, the report reviews the character of the country, the general systems of farming, the system of education and the habits of the people. It then describes the various steps taken to bring the breed up to its present high and uniform standard for bacon production The parts played by the Government, the breeding centres, breeding societies, exhibitions, etc., are all gone into fuliy.

The treatment of the subject of feeding is most interesting and highly valuable for the Canadian pig raiser. It is shown that the system followed throughout is quite uniform and in accordance with the results of many years' experimenting. The character of food used varies with the age of the pigs. At the Government Experiment Station, Class I includes pigs up to 40 lbs.; class 2, 40 to 60 lbs.; class 3, 60 to 120 lbs.; and class 4, 120 to about 200 lbs., when they are finished. On this point the report says:—

All foods are calculated in 'food units,' using one pound of grain, such as barley, corn, wheat, etc., as a basis. In roots and other green feed the food units are estimated on their dry matter, as, for example, 8 pounds of mangels, 4 pounds boiled potatoes, 5 pounds of lucerne or 5 pounds sugar beets equal one food unit. In the case of milk, 6 pounds, and whey, 12 pounds, are calculated to have a feeding value of one food unit. In other words, the feeding value of 1 pound of grain (barley, corn, wheat, shorts, etc.) has the same feeding value as 6 pounds of milk, 8 pounds of mangels, 4 pounds boiled potatoes, 5 pounds sugar beets, or 5 pounds of green lucerne or green vetches.

The varying of the list, so as to secure the maximum of thrift and profit, is clearly explained in the report. The report goes fully into the subject of co-operation, as it is applied to buying and distributing feed, and in the organization and operation of packing plants, which are shown to be working with wonderful success.

Tables are printed, showing the prices paid for pigs to Canadian and Danish farmers for the past seven years, also the selling prices in England of Canadian and Danish bacon, month by month, since April, 1904, until December, 1909. Another table shows the wholesale price of hog foods in Canada, England and Denmark during July, 1909

An interesting feature of the report, covering about four pages, is headed "Lessons for Canadian Swine Raisers and Packers." This is divided into production and marketing. The former reviews the lessons gathered in the different countries, while the latter goes into the situation in Canada, the causes that led up to it, and the methods that have been found in the countries visited to overcome dissatisfaction between packers and farmers and thus to insure a steady supply of the desirable class of hogs. The report ends with suggested remedies, as follows :

Realizing the conditions, which called for the appointment of the Commission, and having studied the methods of successful pig raisers in other countries, Commission submits the following alternate remedies for what appears to be the chief barriers to a prosperous swine rearing industry :

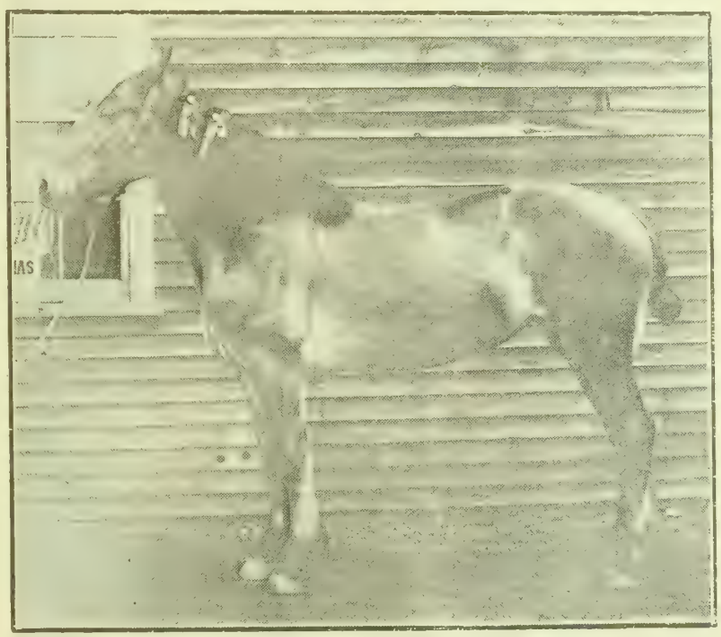
1 The adoption, on the part of the packers, of an attitude of sympathetic co-operation between themselves and the producers, whereby every possible encouragement would be given farmers to increase the quantity and improve the quality of their hogs. This would involve a constant, earnest desire and readiness to afford every facility on their part in co-operation with the producers, to investigate and solve problems which may give rise to dissatisfaction. It would require the adoption of a careful grading of the prices of hogs through the year, guarding against discouraging low levels. It would require the control of buyers and the recognition of quality in the prices paid for hogs.

2 The co-operation of farmers in engaging a salesman for their hogs, as is carried out by the Eastern Counties Farmers' Association of England.

3. The adoption of the system of selling swine on the open market, as applied to cattle and sheep. By the co-operation of neighbors, car loads should be sent forward at regular intervals.

4 The establishment of co-operative packing houses, as conducted in Denmark and in Ireland.

The report, on the whole, is a creditable production of some sixty pages of text, besides a large number of engravings, made from photographs, taken by the secretary, Mr. J. B. Spencer, who acted as secretary and editor. Mr. Ballantyne acted in the capacity of chairman.



Minnie.

First in the General purpose and Agricultural classes at the Maritime Horse Show. Owned by Fowler Bros., Amherst Point, N. S.

"BANK SHARES BOUGHT AND SOLD.

American Securities Co., 627 Confederation Bldg., Toronto.

A County Assoctation Doing Good Work.

The Cumberland County Farmers' Association has been doing some work this month, fourteen meetings have been held in different parts of the County. The speakers have been Mr. L. D. Robinson, of Berwick and R. Robertson, Supt. of the Experimental Farm, Nappan. The meetings have not been as large as we could wish but the addresses have been practical and the interest good.

Spring is early, considerable plowing has been done and some grain sown. We never saw grass so good in April.

C. H. BLACK.

Amherst, N. S.

Growing and Using Corn For Ensilage

Corn for forage or ensilage corn can be grown to advantage in almost all parts of Canada at present occupied by farmers and stockmen. Results have not been satisfactory in every case where efforts have been made to grow it, but this has very often been due to wrong culture methods practised or unsuitable varieties grown, rather than to adverse climatic peculiarities.

REASONS FOR GROWING FORAGE CORN.

The reasons for growing or making an attempt to grow this forage crop wherever live stock are kept in any numbers are numerous and cogent. A few of them follow:M

1. As a plant capable of yielding a large amount of valuable forage under a great variety of soil and climatic conditions, corn is without an equal.

2. When properly preserved, whether as ensilage or dried, it can be used as material to render other less palatable roughage more acceptable to farm animals.

3. It is the best plant or crop for ensiloing that can be grown to advantage in Canada. It is practically a perfect crop for this purpose, hence it helps to solve the great problem of how to furnish an abundant and cheap supply of succulent food for winter or summer feeding of dairy or beef cattle.

4. When properly grown and well preserved as ensilage, it is the equal of or superior to roots in feeding value and palatability. It can, however, generally speaking, be more cheaply grown and more easily preserved than roots.

5. The labor of growing an acre of corn is of a character much more agreeable to perform and much less arduous than that of growing an acre of roots of any description.

6. Corn being a cultivated or hoed crop serves well to clean the land, that is, free it from weeds, so fitting it for grain growing, and putting it into shape to seed down to grass or hay.

7. Corn is a gross feeder and may be depended upon to make good use of a never so abundant supply of plant food. It is, for this reason, particularly well adapted to occupy that place in the rotation where humifying vegetable matter and a fairly liberal supply of barn yard manure unite to supply large quantities of plant food suitable for root, leaf and stem growth rather than for seed production.

8. The growing of corn on a fair proportion of the arable land on the farm will permit of keeping more cattle and so increase the revenue as well as augment the manure supply so essential to the maintenance of soil fertility.

9. Corn when preserved as ensilage, can be stored much more cheaply in much less space than any other roughage. In addition, stored in this way it will keep indefinitely and is always ready to feed.

10. In thirty years' experience in farming in the Ottawa valley, the writer has seen all kinds of grain crops utter failures, he has seen hay so light as to not pay for the making, and roots and potatoes practically nil, but in all that time he has never seen a failure in the corn crop. There has always been a fairly profitable return from the fields in corn.

WHERE TO GROW IT.

Corn will grow in any kind of soil, provided always that there is good drainage. Under draining is not absolutely necessary, although advisable here as with most other farm crops. On low-lying lands, ditches should be in good working condition and water furrows kept open all summer. If a choice of land may be made, then warm-bottomed light loamy soil may be expected to prove the most satisfactory under most weather conditions.

In the rotation, corn should follow clover hay, pasture or meadow. Stubble land as well as lands that have just been in hoed crops are not suitable since the supply of humus or humifying material is likely to be small, and, since corn needs much food such as these substances provide, it would probably fall short of a good crop on account of the lack thereof. Corn might advantageously come after grain or even follow a hoed crop, provided the land were very fertile or a very heavy dressing of manure were applied.

MANURIAL REQUIREMENTS.

The best fertilizing material for corn is undoubtedly good barn yard manure. A mixture of one part horse manure to three parts cattle manure applied green at the rate of 12 or 15 tons per acre, may be expected to give good results. The application might be made in the fall, winter or spring, or during the preceding summer. If ploughed in, only a shallow furrow should be turned. Commercial fertilizers are not necessary, nor are they likely to prove profitable where the above mentioned dressing of farm yard manure can be applied.

PREPARATION OF THE SOIL.

Where clay land is to be used for corn, it is generally well to plough in the autumn, turning a well set-up moderately deep furrow, (6 to 8 inches deep), being careful of course to go no deeper than usual. If light land is to be used, it is generally advisable to plough in the spring, turning a flat shallow furrow, (4 or 5 inches deep). In either case the manure may be ploughed in or worked in on the surface with the disc harrow.

The land should be worked down till a smooth, mellow, yet solid seed bed has been prepared. To get the land into such shape, it may be necessary to disc and roll several times as well as work with a smoothing harrow. In any case, no planting should be done until what might be called a perfect seed bed has been prepared. Success or failure will depend very largely upon this feature of thorough soil preparation before seeding.

SPECIAL PREPARATION FOR LEVEL OR CLAYEY LANDS.

Where either heavy clay land or very level land not under-drained is to be used it is not infrequently advisable to make special preparation by ploughing and working in a special way.

The land should be ploughed in nicely rounded ridges exactly 10 ft. 6 in. from centre to centre. All necessary cultivation should be done as to preserve the rounding surface of the ridges, and the dead furrows should be kept clean and should open into a well-kept ditch, thus insuring good drainage.

In planting, the first row should be run down the middle of the ridge and two others on the same ridge, one on each side, 42 inches away. Thus the rows on the whole field will be uniformly 3 ft. 6 in. apart and alway clear of dead furrows.

WHEN TO SOW.

Corn should be sown as early as weather and soil conditions permit. From the 15th to the end of May, according to district and season, is a very good rule. Very seldom will it do to sow later than June 5th or 6th. Sow when soil is warm and dry.

METHODS OF SEEDING.

Corn for forage or ensilage may be planted in rows or hills. If planted in rows as is usually advisable, the rows should be at least 42 inches (3 ft. 6 in.) apart. The plants should stand about 8 inches apart in the rows. In seeding, it would not be advisable to try to sow as sparsely as this. It is better to give a rather heavier seeding and then thin out to the desired thickness with a hoe when plants are 6 or 8 inches high.

If land intended for corn is very dirty, whether from the presence of weed seeds or couch grass, it is usually advisable to plant in hills. The hills should be at least 3 ft. apart each way and from 3 to 5 kernels should be planted in each hill.

For planting in rows there are special corn planting machines made by various agricultural implement manufacturers. Where the farmer has a grain seeder that sows in rows he can, by closing up part of the seed spouts, use it as a corn planter and so get along without the special implement.

If it is desired to plant in hills, here again special horse planters are available. There are also hand planters of various descriptions on the market which will enable a man to plant from two to four acres a day when the land is ready. If no planter is available, planting may be done with a hoe or even with the foot, when the soil is loose and friable.

If the hill planting is to be done other than with a horse planter, it will be necessary to mark the land off into three foot squares, the hills to be at the corners of the squares. This may be done by a man dragging a heavy chain back and forth across the field till it is marked off into three foot strips, then doing the same thing lengthwise till the whole field is marked off into three foot squares.

A better plan and much more rapid, however, is to construct a marker to run by horse power, then mark the field off into squares by running first lengthwise and later crosswise.

SUITABLE VARIETIES.

The varieties of corn to sow will depend upon the district where the seeding is to be done. For the Maritime Provinces, for those parts of Quebec north of Montreal and St. Hyacinthe, and east of Three Rivers, and for northern Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, the flint varieties should be grown most largely. Some of the best varieties are Longfellow, Compton's Early, Angel of Midnight, North Dakota, White Flint and Sanford. In these same districts a few of the dents may be expected to give good results, the best being White Cap Yellow Dent. In those parts of Ontario east and north of Toronto, as far as Muskoka, in the southern parts of Quebec and in the Eastern Townships, considerably larger varieties may be expected to give good results. As varieties suitable for said districts might be men-

His Late Majesty, King Edward VII.

When the late Queen Victoria took up the sovereign's task her resolve was "I will be good." When 'Edward the peacemaker' assumed the like task his words to his people were: "It will be my constant endeavor to follow the great example that has been bequeathed to me. Confident in the royal support and sympathy of my people and of their representative assemblies, I will, with the blessing of God, solmenly work for the promotion of the common welfare and security of our great empire over which I have now been called to reign." How loyally he kept that vow the judgment of history shall declare and on his death bed, he could truthfully say: "I have done my duty."

tioned any of the flints, White Cap Yellow Dent, Leaming and occasionally some of the larger varieties as Mammoth Cuban or Early Mastodon. In those parts of Ontario south and west of Toronto, any variety, no matter how large, may be expected to give satisfaction. When sowing in rows, it will be found best to sow about 25 lbs. of the flint varieties and about 30 lbs. of the dent varieties per acre. Sowing in hills requires less seed, about 15 lbs. flint and 18 lbs. dent per acre.

EARLY CROP TREATMENT.

A few days after seeding, say the third or fourth day in warm wegther, it is well to run over the field with a slant tooth harrow or lacking this, with a light smoothing harrow. This will break the crust, destroy any weeds and help warm the soil, thus encouraging growth of the corn. A few days after the corn is up, and when it can be seen distinctly in rows, it is often advisable to run the light smoothing harrow over it again. This time it had better be run across the rows. Subsequent cultivation will need to be done with special cultivators.

LATER CULTIVATION.

For working the land until the corn stands about three feet high in the rows or hills, the two-horse riding cultivator will give the best results. This implement straddles a row and gives the soil on either side thereof thoroughly good cultivation, being in this respect much superior to the one-horse walking cultivator. The latter iimplement will, however, be found valuable and necessary after it is no longer possible to work the two-horse cultivator.

The cultivator should be run through the crop, shortly after any considerable rain fall or about once a week in dry weather. As the season advances, a lighter and lighter cultivation should be given. Work may be stopped usually when the corn is so high as to hide the horse and driver from view, but sometimes, however, later cultivation will pay. This will be the case when a superabundance of weeds shows up, may occur in a very wet season, or when the corn suffers from drought in a very dry season.

Very seldom, if ever, will it be found advisable to rib up the corn. Such treatment might occasionally be advisable in a wet season on very low-lying or heavy land, never on light soils.

HAND WORK.

A certain amount of hand hoeing is usually necessary. This should be done first when the corn is six or eight inches high. The thinning to eight inches apart in the rows should receive attention at this time. Plants should be cut clean out to prevent suckers coming on again. Later it will likely be found advisable to again go over the field and remove any further weeds that may come up in the rows. As already stated, when a field is particularly dirty, it is advisable to sow in hills and the cultivators can then be worked both ways. The amount of hand hoeing will in this way be very much lessened.

ENEMIES AND DISEASES.

The corn crop of Canada is remarkably free from enemies and diseases. In our experience here, crows at seeding time and smut at earing time are about the only troubles worthy of note.

Crows.—The crow generally attacks the crop when first the young plants shoot through the soil, or even earlier. There are two effective ways to guard against this winged enemy.

First.—If corn is to be planted by hand, the following method will be found effective. Immerse corn for two or three minutes in water as hot as can be borne by the hand. Drain water off and while still damp and warm add warm coal tar at rate of half a cupful per gallon of corn. Thoroughly mix the corn and tar till every kernel has more or less tar on it. As a drier add a small amount of lime, plaster, or even dry road-dust. If the mixing and drying has been well done, seed so prepared may be sown by machine.

Second.—When crows are noticed on the field, take some corn, say two gallons, more or less, according to size of field it is desired to protect and boil for about thirty minutes in water, just sufficient to cover corn and an inch to spare. To the water and corn, before boiling, add about ½ oz. of strychnine, or better still of strychnine sulphate for each gallon of water. Allow the corn to lie in the strychnine and water over night. In the morning, drain off any water remaining and scatter the corn thinly over the field off which it is desired to frighten the crows.

In making use of the above plan, great care should be taken to pour water off corn into some hole, or on some spot not likely to be frequented by children or domestic animals. Care should also be taken to keep poultry off corn field for some two or three weeks after poisoned corn has been scattered thereon.

Nothing practicable can be done to prevent smut, excepting possibly the gathering and burying of affected ears.

WHEN TO HARVEST.

Corn will be ready for forage or ensiloing when the grain or kernel is in the dough stage and has begun to glaze. If weather conditions are adverse, that is, cold and wet, it is often advisable to cut before this stage of maturity is reached, when for any reason the crop is late maturing. Frost does not spoil the crop for either forage or ensilage, but the feeding value is quite materially lessened if the leaves and stalks are badly frozen.

CUTTING THE CORN

Special machines called corn harvesters are manufactured by various agricultural implement companies, and, where considerable areas of corn are grown, will be found practical and economical. The farmer who grows only a few acres would not find it to his advantage to invest in such a machine. The corn may be cut from three-quarters of an acre to an acre and a quarter in a ten-hour day, using one of the above small tools. With the corn harvester, in ten hours, a man with a good team can cut from four to six acres, according to condition of the corn.

MAKING AND PRESERVING DRY CORN FODDER.

Where no silo is at hand to use in storing and preserving the corn, very satisfactory results may be expected by drying the crop for fall or winter use. To preserve in this way, the corn should be bound into sheaves 8 to 12 inches in diameter and five or six of these made into an open but firmly built shock, the tops being bound together to lend further strength. These shocks, if well built, may be expected to stand as long as it is desired to leave them in the field. In fact ,not a few farmers haul them in as needed all winter.

If barn room is available, they might be hauled in and stored on top of mows or elsewhere, care being taken to place them erect and not to pack too tightly as there is danger of heat or mould. If the corn is fairly dry and straw is plentiful, the corn might be hauled and stored among the straw, placing it in layers, being careful to have a good thick layer of straw, at least 2 feet, between the layers of corn sheaves.

Where it is not desired to leave in shocks in the field and no barn room is available, a fairly satisfactory plan is to haul to the near neighborhood of barn and stand in rows on either side of trestles so arranged as to allow prevailing winds to blow down alleys between rows of corn.

FEEDING CORN FODDER.

The best method of feeding dry corn is to run enough of it through the cut box to last a week or ten days. Mix straw or cut hay with this cut fodder corn. This mass will quite probably heat to a certain extent but this will increase the palatability, unless allowed to lie for too long a time. It is possible of course to feed without cutting, but considerable loss of food and comparatively unsatisfactory results may be anticipated when the forage is fed uncut.

ENSILOING.

The really best way to preserve corn and the way to get the greatest returns from the field in the shape of food, is to store it in a good silo. If very juicy or lacking maturity when cut, it is often well to let it lie for a day or two between cutting and ensiloing. If very dry when cut, it is sometimes well when ensiloing to pour a few gallons of water around the wall of the silo for each foot in height as the ensilage rises, say one gallon to one foot in circumference of the silo at each foot in height of rising ensilage.

In any case, the corn should be cut into short lengths, the shorter the better, say half-inch lengths and well mixed, the leaves with the stems and ears all the way up. It is well also to tramp and fill most carefully around the walls.

It is impossible to properly fill the silo at the one time. It should be filled to the top, allowed to settle for a few days then filled again. It is advisable to repeat this settling and filling more than once if possible.

When filled for the last time the surface should be nearly levelled, slightly higher in the middle if anything, and well tramped. If possible to put a few barrels of water on the surface, less waste may be anticipated. Particularly is this true if the water is used freely around the wall.

THE CUT BOX.

Two distinct types of machine exist for cutting corn into the silo, the chain elevator cut box and the blower.

The chain elevator box will do satisfactory work with less power than will the blower, hence is the advisable kind to buy for the man whose motive power is small. A good two-horse tread power will drive a fair sized chain elevator cut box at moderate speed and raise the silage 30 feet. A very much greater power is required to drive a cut box of the blower type. Another reason in favor of the chain elevator type for the farmer who must own his cut box is the smaller number of men required to handle economically. However, where all the men and horses necessary can be counted upon and a powerful engine is available for driving, then the blower type of cut box may be expected to do the work of filling the silo more cheaply and much more expeditiously than one of the chain elevator sort.

In any case, great care should be taken to keep all machinery in good running order, and particular attention should be paid to keeping the cut box knives sharp and properly set.

USING ENSILAGE.

The ensilage will of course always be taken from the top when it is being fed out. The surface should be kept as level as possible and in winter it will be found good practice to keep the surface a little lower around the wall than in the centre. This will largely prevent freezing to the walls or into the body of the ensilage. Frozen ensilage once thawed out, is, however, quite as good as any other.

Ensilage may be fed direct to cattle just as it comes from the silo, but a better plan is to add to the ensilage a considerable amount, say 10 or 15 lbs. of cut hay or chaffed straw to 100 lbs. ensilage. If floor space is available for the purpose, mixing sufficient cut hay or chaff and ensilage to last several days (3 or 4) will prove to be a very satisfactory method of preparing feed for cattle and a method that they would seem to approve. Any meal to be fed should be thrown on the mixture of straw and ensilage after it is in the manger. Stir the whole mass after sprinkling meal. An average cow will consume about 40 lbs. of such a mixture of ensilage and straw or hay a day.

RATIONS INCLUDING CORN ENSILAGE.

Corn silage and straw or chaff, while together making up a most excellent foundation or base, do not alone constitute a well-balanced or suitable ration for any class of live stock. For f¼eeding heifers or young stock some bran and clover hay should be added. A suitable ration would be:—

For yearling heifers:—
- Corn silage .....25 to 35 lbs
- Straw or chaff ..... 4 to 6 lbs
- Clover hay ..... 4 lbs
- Bran ..... 2 lbs

For dry cow:—
- Corn silage .....50 to 60 lbs
- Straw ..... 8 to 10 lbs
- Clover hay ..... 4 lbs
- Bran ..... 1to 2 lbs

For cow in milk:—
- Corn silage .....45 lbs
- Straw..... 6 lbs
- Clover hay ..... 4 to 6 lbs

Meal mixture: bran, oats, gluten or oil-cake meal or cottonseed meal, equal parts. One pound meal to three or four pounds milk produced per diem.

For steers running over winter (1000 pounds weight):—
- Corn silage .....60 to 75 lbs
- Straw ..... 8 to 12 lbs
- Clover hay ..... 2 to 4 lbs

For fattening steers (1000 pounds):—
- Corn silage .....50 to 60 lbs
- Straw ..... 6 to 10 lbs
- Hay ..... 3 to 6 lbs

Meal—Starting at one pound go up to 10 lbs. per diem.

A good meal mixture would be corn, bran, barley and oil cake meal, gluten meal or cottonseed meal. Take bran and corn, bran and barley, equal parts, of bran, corn and barley, equal parts, to which add an amount of any one of the last three equal to one-quarter of the total weight of the meal mixture when ready to feed.

COST OF GROWING ONE ACRE CORN AND PUTTING SAME IN SILO.

Ploughing	$2.00
Disc harrowing, ½ day.....	1.25
Harrowing, ¼ day	0.62½
Seed, 20 lb. at 2 cents per lb...	0.40
Planting 1-10 day with team...	0.25
Harrowing and cultivating (10 times	2.50
Hoeing, 1½ days	2.25
Cutting, ¼ day with team.....	0.62½
Hauling, one day, team.....	2.50
Men loading, unloading and and ensiloing, 3 days.....	4.50
Use of power for cutting, &c...	1.00
Use of machinery and twine...	.50
	$18.40

To this might be added $3 for rent and $3 for part of manure used up. This would make a total cost of $24.50. From an acre of corn worked as indicated, from 14 to 20 tons ensilage might be expected.

(Continued on page 499.)

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farme of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time to which your subscription is paid.

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MAY 10,, 1910.

Dates of Issue.

May.... 24
June..... ..... 14- 28

DOES IT PAY?

Does it pay to buy cast-off farm machinery? This is not a question that applies to many farmers, yet there are farmers, mostly beginners, however, who try to economize in their expenses by taking what some extravagant man has thrown to one side. It is a question sometimes when one sees a lot of old farm machines piled up in the barnyard whether it is evidence of waste or economy.

The progress of improvement has been so rapid in farm machinery in the last twenty years that the farmer could scarcely keep himself supplied with the improved, up-to-date machinery and get much wear out of his purchases. There have been times when farmers bought too extravagantly of machinery. Machinery was high-priced and farm crops low-priced. The farmer went in debt for machinery and could scarcely make enough to pay his obligations to the implement dealer at the end of the year. There was considerable mismanagement, however; machines were left standing out in the weather all year, often left in the field where last used and were damaged and out of fix when needed for the next season's work.

Care of farm machines has improved greatly in the last few years. It is now quite a common thing to see the farm machines of all kinds put under roof when the crops are laid by and the harvest is gathered. In addition to this better care there is more attention paid to repairs for these machines than formerly. There are some parts of a machine that may wear rapidly, while the main frame and expensive parts will last as good as new almost indefinitely. A mechanical farmer may make money or save money by buying an old second-hand machine, because he sees how he can have it put into good working condition by buying a few needed repairs.

It is usually poor policy to buy some farmer's old machine. The time lost in repairing and tinkering up an old machine and the risk of it not giving good satisfaction in its operation counts seriously in lost time with the hand who has to use it. Time is money now more than at any former period in the history of our country. The new machine, in proper working order and carefully handled, will be found to be the best investment. It does not pay, as a general proposition, to buy an old or second-hand farm machine.

WOMEN'S INSTITUTES.

"The Provincial Department of Agriculture has arranged for the holding of 570 women's meetings throughout Ontario during the coming summer. This is over 50 more than last year and creates a departmental record. All the constituencies will be covered, except a few in eastern Ontario, and organization meetings will be held in those districts which were never served before. The series includes over 100 meetings in northern Ontario, which indicates the growth of settlement and agricultural effort in the newly-organized districts.

"The Women's Institutes are materially extending the scope of their influence and effort. Many public-spirited enterprises have been undertaken by their organizations. In Manitoulin they purchased a buggy for the Presbyterian student who ministers to the spiritual needs of the district. In another locality they erected a fine fence around the local burying ground. In two villages they undertook the lighting of the streets at night. At other points they have defrayed the expense of putting in drains and water service, while in a great number of places they have inaugurated and paid for a tree-planting and beautifying campaign. In Parkhill the Institute has entered into a co-operative campaign with the Grand Trunk for the beautifying of the surroundings of the railway yards."

The foregoing information, furnished by Mr. G. A. Putnam, Supt. of Women's Institutes for Ontario, will be of interest to our lady readers. It shows what is being accomplished by Women's Institutes in Ontario and also furnishes an ideal which the ladies in the Maritime Provinces could well mitate.

There is as yet very little organization along these lines in Nova Scotia, New Brunswick and Prince Edward Island. There is room for more work along these lines in our midst and we trust that ere long our most progressive ladies will clamor for organization on an extensive scale. We know the "powers that be" in the respective provinces will assist the cause in every possible way.

We would suggest that the ladies of the respective districts club together and get in touch with each other.

County meetings, which delegates from the respective districts could attend, might then be held and once a year a large provincial meeting, such as is held by the Nova Scotia Farmers' Association and the New Brunswick Farmers' and Dairymen's Association, might be the capping stone of the organization.

The ladies of Prince Edward Island held two days conventions last year and also this year at Summerside.

We hear occasionally of meetings of a smaller scale being held in various parts of our provinces.

The work is a commendable one, which will be more and more realized as it progresses.

Carry it further until every highway and by-way in Maritime Canada will be organized.

PRACTICAL DEMONSTRATION.

The Dairy Commissioner, Mr. J. A. Ruddick, has completed arrangements for carrying on an extensive series of experiments during the present season, having for its object the improvement of the creamery industry in Canada. The work will be in charge of Mr. Geo. H. Barr, Chief of the Dairy Division, who will be assisted by Mr. J. G. Bouchard, creamery expert, and other members of the dairy staff. There could be no better assurance that the work will be carried out carefully and intelligently.

Speaking of the proposed experiments, Mr. Ruddick intimated that they would be conducted at a creamery and at the farms of some of its patrons somewhat on the lines of the experiments in the cooling and treatment of milk, which were conducted by Mr. Barr during the past two seasons, the results of which have already affected so marked a change and improvement in the methods of handling miik for this purpose.

Mr. Ruddick is a strong believer in the value of practical demonstration or illustration in matters of this kind and he points to the success which has followed the Department's demonstrations in the cool curing of cheese and to the work already referred to in connection with the handling of milk.

The creamery industry, in many parts of Canada, is now conducted on what is known as "The Cream Gathering System." It is recognized that the methods at present followed in operating creameries on this system are defective at certain points and these defects make it difficult to secure the highest results in quality. Many leading dairymen have opposed the adoption of this system on these grounds, but as the farmers are determined to stick to it and it is their right to do so, if it suits them best, it seems desirable that every effort should be made to put the system on the best possible working basis.

"We do not propose," said the Commissioner, "to encourage the substitution of the cream gathering system for the whole milk system, but we shall endeavor to improve existing conditions."

The exports of butter have fallen off during recent years, but there is no decrease in the quantity manufactured and it is just as important as it ever was that the quality should be of the highest class and that the creameries should be conducted on economical lines, not only in regard to cost of operation, but so as to ensure the highest possible return from the raw material supplied.

ECONOMY IN PRODUCTION.

It is not enough to produce a crop on the farm, but it must be produced under strict methods of economy. This means the greatest possible yield for the least possible cost. The handling of the farm means much more now than when lands were low-priced. There is a greater demand in getting a profitable yield of the crop produced. The best paying market crops are studied more carefully now as to demand and to probable yield. The question of soil fertility is also taken into account in the planning of the crops to be produced.

The idea that crops can be produced from lands and still increase the producing power of land is being taken up in view of soil improvement where deterioration exists. Soil improvement is where the land owner looks to the land for part of his profit in farming instead of expecting it all to come from the crop produced. Feeding the soil by crop rotation and crop fertilization is in the line of economy in production.

Economy in production may also be practiced in the selection of crops that are in greatest demand in the markets of the country. The profitable crop, the easily marketed crop, the crop that offers strong resistence to perishable influences, the crop that has an every-day demand, should be studied in view of its adoption into the list to be used.

SOW SOILING CROPS.

Don't forget that although there are many evidences of abundance of grass in the pastures during the coming summer, the usual season of short pasturage will surely follow. If you would keep up the milk flow during the short pasturage season, you should, by all means, prepare a field on which to sow mixed grains, to use as soiling crops. Now is the time to attend to this matter. It is too late to do so when the milk supply runs low and your stock is half famished for want of sufficient sustenance.

* * *

Does your farm wagon need painting? Why not try to do it yourself? Take off the wheels, strip the other loose parts, wash the woodwork carefully, get a can of good paint that is used for such work, and a brush, and go at it. Have the wagon on the barn floor out of wind and storm.

Every Stock Raiser Should grow Rape.

Editor Maritime Farmer:—

One of the most neglected crops on the average farm is that of rape. There are many reasons for this neglect. The chief one, I think, is that its value as a flesh producing food is not generally known; then there is the extra work for the already busy farmer, but, I think if its value was more generally known every farmer would find time to prepare at least a quarter of an acre and sow to rape. As a flesh producing food with a minimum of expense, all who have grown it will agree, that rape is not excelled by any other food. Fed in conjunction with a light grain ration to lambs and young hogs, it makes an almost ideal ration.

There is something in the tender young leaves of the rape plant that seems to keep the system in splendid condition for its work as well as supplying food to produce flesh. Then, again, if the young animal is to be pushed rapidly forward, either for market or show ring, a larger amount of grain can be fed in conjunction with rape than if fed alone, as the rape offsets the dry consentrated grain food, thereby keeping the animal in a healthy, vigorous condition and enabling it to assimalate all the nourishment contained in its ration and thus increasing its gain in flesh, proportionately. We have been growing rape for many years, chiefly for the purpose of fitting a flock of show sheep. We could not do without it for this purpose but it is just as valuable for market lambs, hogs and young cattle. As to the difficulties met with in growing rape, I think there are none. Anyone who has grown turnips need have no fear of a failure in growing rape. The preparation of the ground for rape is exactly the same as for turnips. A piece of stubble land, fall plowed, worked and plowed again in the spring, a good coat of farmyard manure applied and if you wish to bring it along very rapidly apply superphosphate at the rate of 400 pounds per acre; this contains plant food readily available to the young plants, which brings them along very rapidly. Rape seed is exactly like turnip seed and can be sown with the turnip-seeder in drills rather than broadcast, as this allows for a space for the lambs to walk in without tramping any of it down.

Rape should be sown about the last week in June or the first week in July, then it will be fit for the lambs about the first of September; by this time the grass will be getting scarce. There is no fear of the lambs scouring or bloating on it, the first week as they will not eat much till they get used to it. After that do not turn them on when it is wet or when they are hungry. One hour, twice a hay, is plenty for them till they get it eaten off a good deal then they can be left on all thetime. More precaution should be taken with older sheep as they will eat more than is good for them, in a short time. If possible, have the piece of rape adjoining a pasture field; this will make it more convenient in handling the lambs.

If you wish to feed it to the hogs, a piece can be fenced off and cut and fed to them, or another piece may be put in near the barn and the hogs pastured thereon. Any farmer who is in a position to give this profitable crop a trial ought to do so and I can assure him that once having done so he will not do without it another year.

W. R. CLARK.

International Commission on Control of Tuberculosis Among Domestic Animals.

It seems desirable that the public should be given opportunity to know what this Commission is doing in as much as the Commission represents indirectly the Canadian and United States governments, and involves live stock sanitary control work of all of the inhividual states.

The last session held at Detroit was devoted largely to reports. There were present representatives of Canadian and American breeders, Canadian and United States Departments of Agriculture, American and Canadian veterinarians. The following reported: Committee on Education and Legislation; Committee on Location of Tuberculosis in Cattle; Committee on Dissemination of Tuberculosis, and the Committee on Disposition of Tuberculosus Cattle. The Committee on Education and Legislation mad e a partial report presenting a critical study of experience of certain states in their efforts to deal with this problem. The purpose of this was to present full information for the Commission concerning mistakes and failures and comparative successes of communities that have undertaken serious work with tuberculosis.

The committee on Location of Tuberculosis in Cattle presented their report under such headings as "Provisions for Notification", Location by Tuberculin Test," "Location of Infected Herds Through Meat Inspection Services," "Most Important Sources of Animal Tuberculosis."

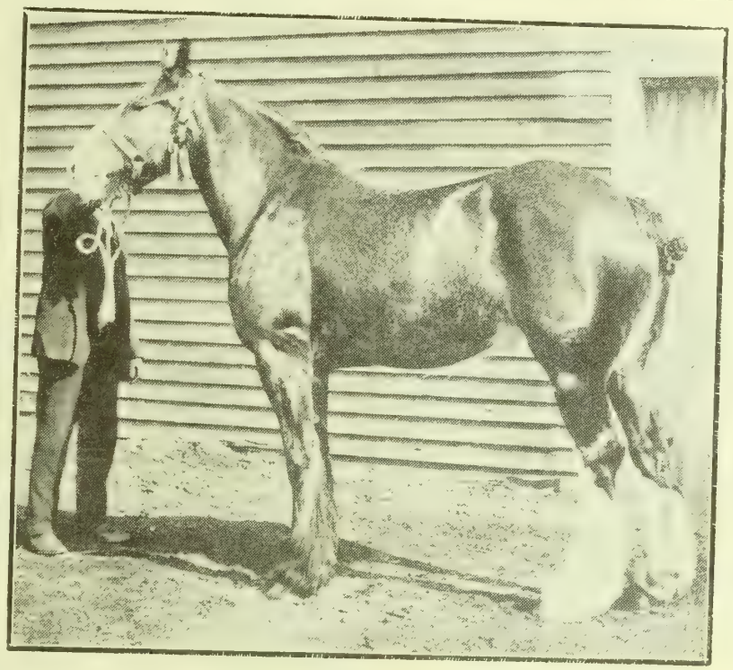
The Committee on Dissemination of Bovine Tuberculosis presented its study under such headings as "Introduction of Disease Into the Herd," "Dissemination by Feeding to Calves," "Dissemination by Contact at Shows," "Dissemination by Placing Healthy Animals in Contaminated Stables," "Dissemination by Transportation of Healthy Animals in Infected Cars," "Dissemination by Pasture Exposure." The discussion of this report gave considerable attention to the problems of tracing back from the killing floor to the infected farm with a view to detecting the diseased herds and concentrating control work as much as possible on diseased herds.

The Committee on Disposition of Tubercular Cattle reported concerning the necessity of accepting tuberculin for diagnosis as a fundamental; the necessity of voluntary co-operation, and the superiority of voluntary co-operation to measures of compulsion. This committee considered the feasibility of the Bang and Ostertag methods of dealing with tubercular herds under American conditions. It also made recommendations concerning the relation of indemnity to final disposition of carcass; the principle of carcass salvage; the obligatory disposal of all clinical cases; and a study of the conditions which should determine the disposition of reacting cattle.

A very considerable amount of discussion on this report was given to the question of remuneration for owners and particularly as to whether this should be regarded as a temporary or as a permanent provision in tuberculosis control work. A number of members held that it must necessarily be considered as a useful preliminary and temporary measure.

Careful consideration was given to the possibility of making either the Ostertag or Bang method of dealing with tuberculosis in the herd, or a combination of the two, feasible in America and Canada grade herds. This is along the line of finding some method more economical than slaughter for as many herds as possible.

The next meeting of this International Commission will be held in Ottawa. R. H. REYNOLDS,



Pink Rose.

Pure bred Clydesdale mare First in single harness, in pair and champion at the Maritime Horse Show. Owned by Logan Bros, Amherst Point, N. S.

Substitute Roots For Concentrates.

Recent investigations indicate that mangels may be used economically, in rations, to replace the grain ordinarily fed to dairy cows. The way seems to have been opened for a revolution in feeding methods, according to Bulletin 268 of the Cornell Experiment Station, entitled "The Substitution of Roots for Concentrated Foods in Rations for Milk Production." Mr. J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, practically confirms the findings of the Cornell experiments. He writes: "Nine pounds of roots for one pound of meal will, up to half the quantity of meal fed previously, be found satisfactory."

During the last six years the cost of concentrated feeding stuffs has increased steadily. The possibility of placing before our farmers a means by which they can reduce their grain bills materially and produce more of the food for their own cows on their own farms, is suggested by the results of these experiments. Danish experiments relative to this subject seems to indicate that one pound of dry matter in roots is equal to one pound of mixed cereal grains. Such results from Danish experiments suggested similar work to the authorities at the New York Station. The purpose of the Cornell experiments was to determine the value of the dry matter in mangels as compared with the dry matter in silage and to determine the value of the dry matter in mangels as compared with the dry matter in grains, in rations for milk producing cows.

The results of the experiments at the Cornell station seem to agree with the results of the Danish experiments and perhaps go a little further, in that they seem to justify the conclusion that one pound of dry matter in mangels is equal to one pound of dry matter in grain, at least when one-half of the grain ration is replaced by mangels; so far as feeding value is concerned in the production of milk, this seems to be a safe assumption from the data obtained.

Taking into accounts the facts given in their summaries, the Cornell experimenters have thought it safe to draw the following conclusions as being true under the conditions noted.

1. The amount of dry matter required to produce one pound of butter fat, taking the average of the results of all rations fed in this experiment, was 28.83 pounds.

2. Less dry matter was required to produce one pound of butter fat when mangels were fed as a succulent food with a full grain ration than with any other combination.

3. The average cost of one pound of butter fat under all conditions was 22.4 cents.

4. The lowest price at which a pound of butter fat was produced was 20.7 cents, with ration I (hay grain and silage).

5. The cost of one pound of butter fat with ration II (hay, grain and mangels) was 27.4 cents. This was considered too high to be economical.

6. The cost of one pound of fat with ration III (hay, grain, mangels and silage, grain ration reduced one-half by substituting mangels) was 20.6 cents. Since the cost of one pound of fat in the check group averaged for the two years 20.6 cents, ration III was considered economical.

7. One pound of dry matter in mangels is a little more than equal to one pound of dry matter in silage.

8. One pound of dry matter in mangels is equal to one pound of dry matter in grain, and mangels may replace one-half the ordinary grain ration with mixed hay and silage.

9. Accepting the average price of commercial feeding stuffs at $30 a ton, and considering one pound of dry matter in mangels equal to one pound of dry matter in grain, mangels may be used economically in the ration to replace one-half the grain ordinarily fed when they can be produced and stored ready for feeding at $4 a ton. In arriving at this conclusion, the average amount of dry matter in grain is considered to be 90 per cent. and in mangels to be 12 per cent.

10. It would seem to be a safe assumption that farmers can raise mangels for $4 a ton and thus reduce their feed bill very materially by the judicious use of mangels to replace one-half of the grain ordinarily fed in the ration.

HORTICULTURE

The Use and Beauty of a Garden.

A young woman was once heard to say of her brother that he "put up ice in the summer and planted peanuts in the winter," and the majority of our farmers pursue a noticeably similar policy in the matter of making a garden. In the winter, when the larder affords no variety from the traditional pork and potatoes other than that which may be obtained from canned tomatoes and dried fruits, bought at the store, they firmly resolve that "next year we will make a good garden," and perhaps their zeal carries them even to the point of buying fifty cents worth of seeds and setting aside in their minds a certain quarter of an acre to be devoted "next year" to the growing of vegetables.

But alas! for the frailty of human endeavor! In the spring, when the mellow brown fields seem to wait impatiently for the harrow and the drill, when machinery must be put in order, and fences repaired, and seed grains fanned and graded, when, in short, the brief and fleeting days of the annual seed time are upon us, and even the lengthening days are too short for the tasks that each one brings, so much of the good intention goes to assist in the paving of a certain ill-reputed place that if there is enough of it left to get the fifty cents worth of seed so much as thrown at the garden, it is matter for comment.

Since, therefore, the average farmer either cannot or will not find time to make a garden, that task, like the care of poultry must necessarily devolve upon the farm woman.

To a great many people a garden means only a place for the growing of vegetables—a place where intermittent rows of onions and cabbages battle for precedence with crops of weeds, the battle going inevitably to the strong. Such a garden is as transitory and unsatisfactory as the annual flowers which cannot be planted until so late that their earliest blooms are but heralds of the frosts that are so soon to destroy them.

But your real garden is a hardy perennial—a permanent institution, not to be carelessly located or lightly transferred. It contains so many delightful things which live through the coldest winter and reappear with renewed vigor in the spring, that the vegetables which are sown each summer, though quite indispensable, are nevertheless little more than an incident in the complete cycle of the garden's existence.

To such a garden as this the busiest farm woman may well devote a portion of her closely filled time.

There is of course a great deal of labor in connection with the making of a good garden that a woman cannot do, such as hauling of fertilizer, spading or plowing the ground, setting out of small fruits, etc., but she is a simple woman indeed who cannot induce her men folks to do those things for her.

A garden should properly contain only small fruits and summer vegetables, with such herbs or flowers as the taste of the owner may dictate, all vegetables intended for winter use to be relegated to the fields where they can be cultivated by horse power. Such an arrangement renders the garden small enough so that the labor involved in its care is not prohibitive.

The formula which spells success with a garden, calls for about equal parts of enthusiasm and labor, and both of these ingredients, the average farm woman should be willing and able to give.

The spot selected for the garden should, for obvious reasons, be near the house. It should be protected from marauding hens either by being fenced in or by having the hens fenced in. The soil must be made as fine and mellow as possible, and it must be heavily fertilized. It is as useless as it is unreasonable to expect good results from poor soil. A plant can no more thrive and become fruitful in a soil which is lacking in the elements of plant food, than a child could grow to perfect maturity on poor or insufficient food.

The ideal garden must contain, in addition to its summer vegetables, rows of raspberries, gooseberries, currants and strawberries, as well as a bed of asparagus and a dozen hills of rhubarb and to be really perfect, it should have its corners spaded up and planted to herbs and sturdy-growing flowers.

A garden such as this ministers richly not only to the material but also to the aesthetic needs of its owners. It yields crisp salads and sweet cool fruits for the table and enhances them by bowls of bloom and sweet odors of thyme and fennel. In the spring, almost before the first bluebird has come, it stirs into life, showing delicate green with its chives and asparagus, and delicate maple-red where the rhubarb is poking its fingers through the dull earth. In summer it yields uncountable good things, and even in winter its brown stalks wave friendly hands to us across the snow, and whisper softly of sunnier days to come.

H. M. W.

More Attention Should Be Paid To Vigor and Utility Than Shape.

In selecting nursery trees to set out a fruit plantation, it is of prime importance to possess an idea of what is and what can be considered to be first-class stock. Various conceptions on this point are held by the very best fruit-growers but the consensus of opinion resolves itself to somewhat of this description. Stock to be first-class must be thrifty, clean, of good growth and of a character and shape true to the variety.

It would be impossible to lay down a hard and fast rule as regards the shape of a tree that would be broad enough to cover all varieties of nursery stock. Some of our best varieties are naturally, if grown on their own stock, crooked, gnarled and ugly. But what matters that, if while corresponding to characteristics the tree is thrifty and of definite weight, the bark is clean, of good color and devoid of insect injury, and the twigs are full of vitality and life? Such points as these are of greater importance than the actual shape. While it is desirable to have a tree with a central leader and three or four side branches symmetrically arranged on a straight growing trunk, it is not always to be expected.

Two points can now be deducted. First, it is more important to pay attention to vigor than to shape; and secondly, select your varieties from the market qualities of the fruit that the tree will in time produce, being thereby not deluded by the seemly appearance of a tree growing in the nursery row. It is well to remember, in this latter connection, that it is the fruit-grower and not the nurseryman who should set the demand.

class should be one of medium size.

Furthermore, a tree to be first-The majority of two-year-old apple or plum trees, for instance, should go about three-quarters of an inch, four inches above the bud. Quite a number of the sweet cherries should run about the same. No definite rule again can be given but it would be well to mention that it appears that the prevailing opinion decides in favor of trees rather under the average in diameter in preference to trees above the average in diameter. Possibly if the trees did not have to be transplanted from the nursery row, the larger size would be in favor.

At the present time it is found that the planting of one-year-old stock is yearly gaining ground. It would appear that the tenderer the tree the younger is it purchased, so that it can become established quicker; for example, peaches and sweet cherries.

One point further might be mentioned. If our tree is all that can be desired as regards shape and thrift, it might be a litter closer to perfection if the bud or scion from which the tree has grown had been taken direct from a bearing tree. While it is unreasonable to suppose any difference between a normal mature leaf bud taken from a nursery tree and a similar bud taken from a bearing tree, yet yearly taking scions from a number of nursery trees naturally allows of a system of inbreeding which might result in slight harm. Nurserymen are in the habit of renewing their buds from bearing trees every so many years, so that the possibility of deterioration is reduced. The elements of heredity are presumably present in every bud and a type once established naturally breeds true, so that if there is a falling off it must be due to adverse selection, accidental or otherwise.

R. C. TREHERNE.

Make a big profit from every cow
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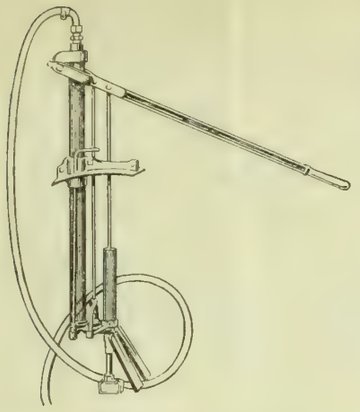

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No greater mistake can be made than that of allowing orchards to remain in sod year after year. Nor should we expect two crops a year from the soil when the orchard has reached full bearing age. We often look upon an apple tree as being a deep feeder and hence leaving the surface soil quite fertile and valuable for other crops. The fallacy of such a belief soon becomes evident when we start to plow up the old orchard. A perfect network of rootlets will be discovered right to the very surface of the ground.

When plowing up an old orchard, we should not overlook this fact of so many rootlets being near the surface. Deep plowing might not prove an advantage. It is better to plow as shallow as possible and in this way save the roots from destruction as much as possible.

After the seeding has been taken care of, before that, if possible, it will be a good idea to get into your orchard with a plow; and count on having it cultivated every year. Cover crops of clover, or rape, or other crops to suit the purpose, may be sown later on in the summer when it is desired to check the growth of the tree and ripen the crop and mature the wood for winter.

In early fall, pigs or sheep may be turned into the orchard and allowed to pasture on this crop and to take care of wormy apples and windfalls that might otherwise go to waste and in the case of the former be a nuisance in propagating their kind for another year.—T. R. James in Farm and Dairy.

Head the old Trees Low.

With the certainty that much more attention is to be paid our apple trees than in former years, it is well to suggest that in the pruning this year the old trees be headed lower. This is a simple matter. It only means the cutting out of the top to let in the sunlight and thus snipping off the tips that shoot up allowing those which reach out to remain. The difference between a low headed and a high tree at picking time will be from fifteen cents per barrel in one case to fifty in the other. It is not a question of more apples but of a full crop so grown that it can be gathered at least expense. It is possible by the use of a strong nitrogenous fertilizer for one or two years to make an old tree, practically worthless, all over with a new top. The story of the big Boston Fruit Show is significant here. The great prizes for Spys, Greenings, and other varieties were won on apples which grew on old trees which had been retopped after the manner indicated. It means a little work, a little fertilizer in early spring and the stirring of the soil under each tree.

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Don't take chances on doubtful seeds—insist on Ewing's. If your dealer hasn't them write for our Illustrated Catalogue and buy from us direct. Write for the Catalogue anyway.

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Reliable Seeds 6

Georgian Bay District Apple Output

The Georgian Bay district put up 166,000 bbls. of apples last year, reports A. Gifford, "and the equivalent of 46,000 bbls. more in the form of evaporated stock. The barrelled apples averaged $1 per bbl. net for firsts and seconds, while the culls netted 45c. Our own orchard was sold at $1.65 for firsts and seconds but in this case we did the picking. In the case of well-sprayed orchards 75 per cent. or 80 per cent. of the fruit was No. 1, while only about 30 per cent. graded No. 1 where spraying was not done.

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Here are a few facts about the Frictionless Empire that are worth knowing if you are in the market for a cream separator:

Frictionless Empire has **fewer wearing parts** than any other cream separator. It is the **only** cone-method separator with **ball bearings** at top and bottom of bowl-spindle.

Requires so few drops of oil per day that **no oil cups** are put on the machine.

Skims to a **trace.** The six smooth cones are as easy to clean as an equal number of glass tumblers.

The height of the supply can is just right. The grip clutch allows separator to be **started without effort** and to reach full speed in a few seconds.

Doesn't spatter oil or milk—the clean separator, with anti-splash one-piece steel supply tank.

The foregoing brief facts are explained fully in our **New 25c Book.** The most unbiased book on cream separators ever published. Tells **the truth about the two standard methods** of cream separation. We will send you **one copy free,** provided you tell us the number of cows you keep. Also name of the publication in which this ad. appears. Don't miss this interesting book. Ask for book No. 56

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DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Starters.

The valuable starter is no longer a debatable point. In sour butter creameries a starter is invaluabie, because the demand of our market is for "special" butter, and if we do not give the consumer a first class article he is going to use a substitute for less money.

By using starter, fermentation is largely controlled, and when fermentation is controlled a good flavor is practically assured.

The practicability of the use of starter has been demonstrated, for we find it in our best and most successful creameries.

I shall consider five requisites for successful starter propagation.

Frst and most important, the operator or propagator must be capable. He must be careful, and he must know the difference between not only a good and poor starter, but he must be able to distinguish between a good and a medium one. He must be a student at his work, for a new problem continually arises. The methods used by one man cannot be copied eactly by another working under different conditions.

This should not be discouragiug to the beginner, but rather the opposite.

The other requisites can hardly be named in order of importance.

Second. Careful selection of seed. The necessity of this is obvious Good seed can be gotten from dealers who handle the commercial starter. This is not all, however; in the transferring from one culture to another the the ripened starter must be examined carefully. The curd should be smooth and custard-like in appearance. This point is reached just as the curd forms. Gas pockets must be absent, and the flavor of a clear, mild acid nature. After the curd is examined the starter should be agitated, some poured out into a cup or dipper, and further examination made from this, and not from the original starter receptacle. The smell should be carefully noted, and at least a teaspoonful placed in the mouth for examination of the flavor. It is desirable to have about 70 or 75 per cent. acid.

Third. Preparation of the seed bed. This seed bed may be either whole or skimmed milk. Whole milk is a little more easily selected. If, however, the starter is lost whole milk is rather expensive.

After the selection of good milk, the undesirable plant must be weeded out. This is done by pasteurization. The methods used in pasteurization vary a great deal.

I was surprised when I came to New York State to learn of the high temperature used, also the long time employed. However, I suppose that I should not be surprised, for when I came here I heard for the first time the expression "farming it." Out in Indiana I heard the expression "right smart." In different localities various expressions and also different methods of work are used.

Now regarding pasteurization. In "The Preparation of Starters," by Elov Ericsson, under date of November 12, 1909, we find these words:

"The milk should not be pasteurized more than so as to have it sufficiently pure for starter. A temperature of 190 to 195 degree for 30 minutes is ample for destroying all germs in vegetative state, In order to destroy the spores, either a temperature of 250 degree for 20 minutes, or heating to 200 or 210 degree for 20 minutes for three successive days is necessary."

Prof. F. W. Bouska in Bulletin 103 of the Iowa Experiment Station, under days of March, 1909, says:

"In pasteurizing milk for starters it is best to apply the heat for thirty to sixty minutes. A temperature of 150 degrees F. kills all the sporeless bacteria. Higher temperatures, up to 212 degrees F., do not kill the spores, but they are so weakened by the higher heat that they germinate more slowly and their harmful effect is retarded. This fact, and the results of experience, indicate a temperature of about 185 to 200 degree F. as best. The heating and cooling can be done in cans immersed in water. Stirring hastens the process, but it is not necessary when the heating surface is not hotter than about 200 degreef F. Where the heating is done by steam, stirring is necessary to prevent scorching."

In Bulletin 181 of the Wisconsin Station, dated September, 1909, we find the following by Prof. E J. Hastings:

"The plan of heating the milk three times in three successive days in order to destroy all the spores is not necessary. It involves much work and injures the milk for starter making purposes. The less the milk is heated the better soil it seems to be for the lactic acid bacteria. As mentioned above, the spores are not to be looked upon as a source of contamination. Since they do not have an opportunity to grow in the milk seeded with lactic bacteria, they will rarely cause the deterioration ot the starter unless the milk used is old and dirty, and hence contains a large number of spores."

In the phamplet on A Treatise on Starters, by Martin H. Meyer, formerly an instructor in butter-making at Wisconsin, and published by Chr. Hensen's Laboratory, under date of October, 1909, we find these words on page 10:

"Set two vessels each containing one quart of milk into water and heat it to 170 degrees F. to 190 degrees F., and hold it this temperature for about forty minutes. Cool quickly to 80 degrees F., and it is then ready for the addition of the pure culture."

Also on page 20:

'Heating the starter milk twice to about boiling point has a very detrimental effect on the quality of both the milk sugar and the lactic acid. There are more starters spoiled by overheating the milk than many butter-makers imagine. The milk invariably takes on a brownish color when overheated. This indicates that the milk sugar has caramelized by reason of having been scorched. By changing the condition of the sugar, an inferior quality of lastic acid is produced. It is only natural that when the milk sugar is scorched, the starter will have a burnt flavor. This flavor is also imparted to the butter by use of such a starter and it destroys the fine "bouquet" so desirable in butter. Such a starter is usually spoken of as a pink and brown starter and as having a scorched or burnt flavor."

In the Michigan Bulletin No. 246 dated June, 1907, by L. D. Bushnell and W. R. Wright, we find:

"If a large can of recently pasteurized milk has been cooled below 100 degrees F., the contents of the jar from which the transfer was made may be emptied into it, thus completing the work of preparing a starter for use on the following day for ripeding large quantities of cream. By this method only a quart of milk out of a large can of starter has been sterilized, a quantity too small to be detected in the cream or butter."

It seems that our literature on starters is not favorable toward high pasteurization to such an extent that the starter is cooked or burnt. However, I learn through Mr. W. W. Griffith and Mr. W. E. Ayres that the high pasteurization temperature is very common in New York. Yesterday I learned from Mr. White that this method is being used elsewhere.

Personally I ahould like to see this tried out under some conditions. If the burnt flavor leaves the butter within a few days as I hear is true, and the butter is just as good as made from lower pasteurized starter and milk can thus be used for starter which otherwise could not be used, it is a great step in advance in starter propagation. However, it seems to me that this is an extreme method, and should not be used unless necessary. If the starter milk is good and low pasteurization is effective, why use the longer and more expensive method? On the other hand, if the operator has difficulty, and high temperatures cure that difficuliy then use the high temperature. While doing some extensive work in Ohio I had occasion to drive out past a little country church. In the evening I learned its recent history. The people had had a division of belief, and the congregation was split up. The old line clamed that the devil had two horns, the conservatives claimed that he had only one, and the progressives said that he was a muley. I do not know that it makes so much difference whether the devil has two horns or none. In other words I do not know that we need to discuss this question. However, I wanted to bring out the fact that there is a difference of opinion regarding pasteurization.

Fourth. Care in method, and amount of inoculation. It is obvious that the propagator must be careful to do the seeding in a quiet and clean place. He must beware of contamination.

The amount of inoculation varies with the temperature used. Usualiy about 1 per cent. or two per cent. is used; 6 per cent. to 10 per cent. is used by some. I have thought that I have been more successful with the larger inoculation and the lower temperatures.

Fifth Ripening and holding temperatures. Temperatures from a little above 60 degrees F. to 75 degrees F., seems to be within the zone of greatest relative growth of the lactic acid plants. When the lower temperatures are used, the starter is more readily cooled to the holding temperature. Over-ripeness is more likely to occur when the high temperatures are used than when a temperature of 62 degrees F. to 65 degrees F. is employed. And we must remember that the over-ripe condition is very undesirable.

Starter should not be held longer than a few hours. However, it may be held a day or so at a temperature of 40 degrees F. to 50 degrees F. It is claimed that lower temperatures put the bacteria in a dormant condition, and thus they are not as active when first scalded as they should be.

I have only broken the ice in this subject which so vitally concerns the greatest factor in butter-making, i. e., flavor.

E. S. GUTHRIE.

Foundation of Successful Dairying.

Perhaps the first important factor to consider in dairying is the stable wherein the cattle are to be housed. Economy should first be considered, nevertheless this should not deprive the owner from establishing the proper conditions for the betterment of the herd to be housed therein, keeping in mind the necessity of plenty of sunlight, proper ventilation, cement floors, proper drainage, comfortable ties etc.

As to the breed of cattle, this can best be determined by the contemplating purchaser, which fact he alone can determine from the standpoint of quantity or quality of milk required by his market, some dairy breeds giving large quantities of milk while little butter fat, while others give less quantities of milk with more butterfat, but regardless of this point in view he should first consider the animal from the standpoint of health, ascertaining as to whether or not it is free from tuberculosis etc. and under no condition should any animal be introduced that is not in perfectly healthy condition.

(Continued on page 500.)

Consumption Book FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

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If your dealer does not handle these two labor-saving devices, write us. 68

DAVID MAXWELL & SONS, - ST. MARY'S, Ont.

Salt for Dairy Cows.

Several years ago the Wisconsin Experiment Station carried on some extensive experiments to determine the value of salt for milch cows and also the amount of salt that should be given. We do not have space to go into details of how this experiment was carried on, but we quote the summary of their findings along this line :

In every case the cows exhibited an abnormal appetite for salt, after having been deprived of it two or three weeks, but in no case did the health of the animal, as shown by the general appearance, the live weight, or the yield of milk appear to be affected, until a much longer time had elapsed. This period of immunity varied with individual cows from less than one month to more than one year.

In every case there was finally reached a condition of low vitality in which a sudden and complete breakdown occurred from which recovery was rapid if salt was supplied. This stage was marked by loss of appetite, a generally haggard appearance, lusterless eyes, a rough coat, and a very rapid decline in both live weight and yield of milk.

The breakdown was most likely to occur at calving or immediately after, when the system was weakened and the flow of milk large. In general, the cows giving the largest amount of milk were the first to show signs of distress. They all suffered less in pasture than when confined to the stable.

The behavior of the cows in these trials indicates that their food contained sufficient chlorine to maintain them in good health, while dry, for an indefinite period and it seems probable that, under conditions existing in Wisconsin, a dry cow or steer would suffer no great inconvenience if given no salt, except that contained in the normal ration. It is calculated that the ration given in these experiments contained chlorine equivalent to about .75 of an ounce of salt per day, and it is assumed that this is the minimum amount of salt required per 1000 pounds, live weight, to sustain an animal that is not producing milk. If this amount is not present in the food, it should be supplied directly.

In addition to this a cow should receive enough salt to compensate for the chlorine contained in the milk produced. In general, this will require about .6 of an ounce of salt for each 20 pounds of milk given. A slight excess will do no harm, and it is recommended that dairy cows in Wisconsin be given at least 1 ounce of salt per day. Exceptionally heavy milkers will require more than this.

The uniform results obtained with all cows employed in these trials indicate beyond question that in Wisconsin, and in other regions similarly located, salt, in addition to that obtained in the food, is absolutely essential to the continued health of a dairy cow, while producing milk.

It is evident, moreover, that the amount of salt which must be supplied directly, will vary greatly in different localities, it being more at high elevations and at places remote from the sea.

The success of these experiments must be chiefly attributed to the exceptionally long periods during which salt was withheld. In no previous tests, so far as the writer knows, have cows been deprived of salt for more than thirty consecutive days, which period is shown to be entirely inadequate, under conditions which exist at this station. The twenty-three cows that were deprived of salt in our trials all continued for more than sixty days and several of them for more than six months before any noticeable effect upon their physicial condition or yield of milk occurred.

Mold Prevention.

Judging from the letters we get at the college it seems to me that moldy butter really merits more attention than it receives. I believe a great many buttermakers have incorrect ideas as to the score of a large amount of moldy butter. If we are to prevent mouldy butter we must pay attention to the sources from which mold comes. We have our mothods of treating the tub so as to destroy the mold spores that happen to be in the tub.

One of the incorrect ideas which many have as to the cause of moldy butter is with reference to the refrigerator. Last winter we received many letters, one creamery especially saying that the year previous they had a large amount of trouble with moldy butter but they thought it was from their refrigerator. They took out the old refrigerator and installed a first class new one. Now, gentlemen, the refrigerator itself is not going to cause moldy butter. You may have a refrigerator that is so damp that mold will grow on the walls, but that isn't likely to cause mold on butter. Mold comes from mold spores.

For instance, a source of mold to which the buttermaker does not devote attention at the present time is the paper and wrappers. I am certain that the paper itself may be just as much a source of trouble as the tub unless it is in good condition when used or treated in some way to destroy the mold.

You all know the conditions that favor mold growth. One is an abundant supply of moisture. Another thing we have to have is air. The third thing is some food malerial. Mold will grow on practically anything, but the kind we find depends upon the material itself. On paper, instead of having a mold that is greenish in color, we have one that is black. The mold plant which we get on ordinary material is colorless and only when it produces the seeds does it produce color. The plant on butter is black. There are always more or less mold spores on liners and wrappers. Whether we get into trouble with these depends on how we store that paper after it comes to us. When we store butter in a clean and dry place it can't grow, but as soon as we put the paper in a damp place so that it will gather moisture we will have trouble.

The mold we get on our butter does not grow on the butter itself. It grows very largely on paper. Butter is not a good food material for our ordinary mold, but when we bring that paper in contact with the butter the mold grows on the paper quickly and penetrates into the butter. In tubs it grows on the wood and then on the butter. When we place butter in tubs, especially in unparafined tubs, the moisture is taken up by the tub and the butter shrinks, leaving an air space which is a good place for mold to grow.

I think that the points, which I have mentioned are the most important from the standpoint of the buttermaker. Where the stock is held at a low temperature—below the freezing point—of course that stops the growth mold. When it comes to treating the paper that seems to me to be of very much less importance. You can treat the paper in a number of ways. If you soak the paper in brine for a considerable period, possible you would not have much trouble. Brine is not half strong enough to kill mold spores. If we treat paper with some great agent that is strong enough we will likely prevent all trouble. Soak your paper in lime water. It is perfectly harmless. The only thing is to use perfectly fresh lime. By soaking the paper in that for two hours we will destroy very largely the mold spores. The great advantage in using lime is the fact that it is cheap.

Another thing which can be used, and which is stronger than lime, is hydrogen peroxide used in a 10 per cent. solution. The disadvantage there is the expense. It costs 25c. per pound.

Another way which can be used is simply treating the paper in hot water. Place the package of wrappers in a pan and bring the water up to a boil. That does not injure the paper at all and puts it in a good condition to use on the butter.

I want to emphasize that the most important thing for the buttermaker to do to prevent mold, is to be careful where the paper is stored.

The question is asked how are we to test paper for mold ? I will say that we simply put samples of the paper in conditions that are favorable for mold growth. Put it in a pan and cover it over with another pan.

A great many creameries wrap their butter with moist paper, but butter that has been treated with boiling water will dry quickly.—PROF. E. G. HASTINGS' address before Wisconsin Buttermakers' Convention.

Dairy Notes.

It is a dead loss to allow milk to sour before skimming unless the cream can be churned at once.

Absolute cleanliness is essential about the dalry and any departure from this is detrimental to the product.

When we feed the cow a variety of grains we come nearer to feeding an evenly balanced food than if we fed only one kind.

Nothing sold from the farm improves it so little as butter. Hence it comes that it pays better than any other product.

FORESIGHT

Means Provident Care for the Future.

Is it FORESIGHT to WASTE money on a FLIMSY CREAM SEPARATOR because it is a LITTLE LOWER in PRICE? It may skim for a SHORT TIME, soon GETS OUT of REPAIR and is READY for the SCRAP HEAP in a YEAR OR TWO.

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whose GREAT SUCCESS has been attained by building this Cream Separator superior in every way to all other separators.

DO NOT TAKE our word for it, BUT COMPARE it, point by POINT, with any or all separators and you will find EACH PART in the MAGNET STRONGER and BETTER ADAPTED for doing the WORK FOR YEARS than the parts IN ANY OF THE OTHERS.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT
STEADY AS A ROCK

Here are the points :—

1st The square gear construction.
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The Milk Supply for Towns and Cities.

The milk supply for towns and cities is a question that is receiving the attention of scientists the world over. Much agitation for a pure milk supply has taken place in many cities and towns in the Maritime Provinces and elsewhere. The demands are universal and the production of a sanitary article must be the result.

Mr. L. A. Gibson, Milk Inspector, Winnipeg, has the following to say on the question, in a recent issue of the Nor'-West Farmer—the conditions that obtain in the west are also applicable to the east:

"The Manitoba Dairy Association has for many years discussed the production of milk for the manufacture of butter and cheese. But the idea of making a separate study of city market milk is something new. Why is this! In the advance of the human race and the progress of science new light is being shed on dairy matters, because the newest of all sciences, bacteriology, has shown that many diseases are caused by a specific germ or seed; no seed, no crop, whether of wheat or typhoid fever. Of late, bacteriologists have turned their attention to market milk, and have found it a favorable medium for conveying the germs of disease because when people live in cities under more or less unnatural conditions, their powers of resistance are weakened, and the disease germs may find more favorable places for germination and growth than in the country. Hence the increased attention now being given all over the country to the proper preparation of market milk.

The study of bacteriology has shown that milk may contain and convey to human beings seeds of tuberculosis, typhoid fever, scarlet fever, digestive troubles and other physical disturbances. As milk is the exclusive food of many babies, the result of using milk that is impure is most strikingly manifested in facts relating to infant mortality. How shall we prepare city milk, or any other milk, so that it may be a safe article of food, especially for children? First, have healthy cows. Milk from cows with feverish conditions, inflamed udders, should not be used for human consumption. The recent International Tuberculosis Congress, composes of the world's best authorities and experts, expressed the unanimous opinion that tuberculosis can be transmitted from the bovine to the human race. It therefore follows that cows producing market milk should be free from tuberculosis.

"The dairymen of this province are face to face with the serious problem in this respect. It is true that to-day from thirty to fifty per cent of the cows in Manitoba are affected with tuberculosis. This is a very serious state of affairs. I have great faith in the tuberculin test for diagnostic purposes. But I am not in favor of compulsory testing for the reason that unless you have public sentiment behind these laws they are of very little account. The main question is one of education. First of all, we require a great campaign for more sanitary stables with an abundance of light and ventilation. Unless we have these the testing of cows will do little good. Common sense says: "Clean up your barns, let in more light and ventilation." This campaign should be carried on by the provincial government throughout the province by means of addresses, printed bulletins, and post mortem examination of tubercular animals. Get the public thoroughly aroused to the necessity of fighting the disease. Then, too, the consumer requires to be educated to pay an extra price for better quality of milk.

"Contagious diseases: No person should have anything to do with a milkman who has any contagious disease or when any disease exists among his immediate associates. In the city of Winnipeg in 1908 two outbreaks of typhoid were due to accidental infection of milk, one consisting of twelve cases and another of twenty-six. To avoid infection of milk from contagious diseases, take precaution in regard to the health of those who handle the milk, Sterilize bottles and utensils every time they are used. Keep flies away from milk and from everything with which milk will come in contact.

"The third, and by far the most common, form of contamination of milk is with bacteria which are not the germs of any specific disease, but which can upset the weak stomach of a baby or invalid, causing cholera infantum, dysentary, and other forms of disorders. These germs are intimately associated with filth. Clean milk contains few bacteria. The more dirt and foreign matter milk contains the more bacteria and the more varieties of bacteria it will contain.

"Remember that most of the contamination of milk comes from dirt in the air; that all air contains some impurities constantly settling in every exposed substance. Hence, milk should be exposed to the air as litttle as possible and what exposure is necessary should be in air as clean as possible. In order to meet these requirements, provide yourself first of all with a small top milk pail. An opening one-half the usual size will keep out one-half the usual amount of dirt. Then, the cow should be clean. She should be brushed, or groomed daily. The long hairs on the udder should be clipped and the udder itself should be carefully washed before milking. The milker should wash his hands before sitting down to milk and should wear a clean suit while milking. The stable should be kept clean from dirt and cobwebs, and whitewash should be frequently used. When a cow has been milked, the milk should be removed immediately to a clean milk room, with a good cement floor. The milk should be promptly strained and run over a cooler. A word as to straining:

"I have heard producers brag about straining their milk through twelve thicknesses of cheese cloth. Dirty milk cannot be purified by straining. An occasional hair or straw may accidently get into the milk in spite of the greatest care, so some straining is necessary But much of the dirt that gets into the milk is soluble and goes through the strainer. The gospel of clean milk is not a strainer gospel, but a gospel of prevention. The importance of prompt and efficient cooling of milk can not be overestimated, as bacteria multiply rapidly when warm, but cease activity when cold. The ideal way of handling milk is to cool it to fifty degrees Fahrenheit promptly after milking; then bottle or can at once and cover promptly. Don't leave the cans uncovered under the mistaken idea that this is necessary in order to allow the animal odor to escape. Clean milk has no animal odor. Finally, store the mllk where it will keep cold till delivery.

"A word in regard to delivery: The cleanest and best way of delivering milk is in glass bottles, provided you have proper apparatus for washing and sterilizing the bottles; if not, they are liable to carry disease from one house to another. Another source of contamination is the milk utensils. When made of tin, utensils should have no crevices or seams, which are hard to get at in washing. A superficially clean pail or can may be disgusting when you examine the seams. A liberal use of solder should render the inside of all cans or pails smooth and cleanable. Rusted tinware should be avoided.

"To get a proper milk supply, a campaign of education must come first. Consumers must know what to demand and be willing to pay a good price for superior quality of milk. They must also know how to care for the milk after they receive it, as much milk is spoiled after the consumer receives it, on account of not giving proper care. Producers must know how to supply the demand, as this is a very important industry and requires the greatest attention possible, as a better quality will increase consumption. The cities and towns of this province use each year 63,700 quarts of milk, valued at $1,628,800. By close attention to all details, this amount should be doubled in a few years. It behooves the milk producer to read the signs of the times and so improve his product that he will not fear coming legislation, which, on the ground of public health, may be expected to exclude much of the milk now sent to the market. It is one of the functions of the Dairy Associations to push the educational phase of the work, to explain these "signs of the times" to milk producers, so that the progressive ones may voluntarily clean up and practice satisfactory methods. This Association can, in this way, be of great assistance to Manitoba producers, who should loyally support it."

It is No Longer a Question Does a Separator Pay?

THE QUESTION IS—

What Kind Shall I Buy?

Drop a postal to our nearest branch office and get THE CAPITAL book. It tells you some FACTS worth knowing about separators—how THE EASY RUNNING CAPITAL will "BUY ITSELF" for you—THERE'S THE ANSWER—

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with it's close skimming, "easy to wash" bowl, weighing less than four pounds, gets you all the cream.

We Save Years With Our Gears,

The National Mfg. Co., Limited,

OTTAWA, Ont. REGINA, Sask. EDMONTON, Alta. MONCTON, N. B.

Straight Talk on Cow Care.

M. H. Gardner, superintendent of the advanced registry for Holstein cows in the United States, in a recent circular, offers some open advice to a beginner with the breed that is worth passing on. The advice was intended primarily for advanced dairy farmers, but it deals with the principles that are at least so much alike on every farm, that no one could tell the difference. The enquirer asked, "How long before the beginning of a test does the owner begin to prpare for it?"

Mr. Gardner, in his reply, says: "No direct answer can be given; it depending upon the owner, the cow, and the circumstances. The object, however, of admitting cows to advanced registration that have proved their capacity and value by making good under official test and bulls that are the sires of such cows, is primarily for the improvement of the breed; and the success of any test will depend upon the hereditary vigor and capacity of the cow, on her proper development, and on the skill of her handler.

"That a cow shall have vigor and capacity of development, she must be well born; and to be well born, she must have strong, vigorous parents. Thus, it will be wise to begin to prepare for the test before either sire or dam are born. If the grand-sires and grand-dams, being good animals individually have been liberally fed from birth, so that at mating time they are vigorous and of full size for their ages, and the cows are so fed during pregnancy as to be able to properly nourish their unborn calves, a strong and healthy sire and dam may be confidently expected; and the repeating this process, as to care and feed, with sire and dam, will produce the animal herself.

"If the grand-dams and dam have their natural capacity for milk production fully developed, so much the more likely is it that the animal will have a greater inherited capacity; and with an animal so bred, the owner has his material for development. The results of the test will then depend upon care and feed from birth up to fullest maturity.

"All the requirements in successful dairy husbandry can be boiled down into just care and feed; but both must be of the right kind. No animal that is not kept in a warm, clean, well ventilated stable in winter, or is allowed to fall off in flesh and milk in summer, because of short pastures and torment from flies, can be regarded as having the right care and feed. Negligence in summer is more frequent among breeders of dairy cattle than it is in winter.

"The main dairy problem is the problem of right feeding; the man who deprives his cow of feed for which she will give him a return in either growth or milk is the opposite of wise, for he depletes his own purse. No cow that has been stunted in growth can in the nature of things attain to the point she might have reached; yet the proportion of undersized cows in pure bred herds, to say nothing of the common dairy herds, is entirely too large. Give the cow a chance, then if she does not make good, send her to the block.

Blood Was Bad.

From impure blood comes Pimples, Boils, Ulcers, Tumors, Abscesses, Festering Sores, Rashes, Constipation, Headaches, etc.

Get pure blood and keep it pure by removing every trace of impure morbid matter from the system by using

BURDOCK BLOOD BITTERS.

Mrs. Fred. Biggs, Kingston, Ont., writes:—"I was completely run down, my blood was out of order, and I used to get so weak I would be compelled to stay in bed for weeks at a time. I could not eat, was pale and thin; every one thought I was going into consumption. I tried everything and different doctors until a friend advised me to use Burdock Blood Bitters. I did not have one bottle used when my appetite began to improve. I used six bottles. I gained ten pounds in two weeks. When I began to take it I only weighed ninety-three pounds. It just seemed to pull me from the grave as I never expected to be strong again. I will tell every sufferer of your wonderful medicine."

For sale by all dealers.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Chat About Butter.

"Just take enough space in your 'gossip column' to tell the butter makers that the time has come for them to reduce the amount of coloring matter that they are using in their butter,'" remarked a prominent operator. "The season this year is so early that the cows are already getting a bite of grass, and this gives more color to the butter. Several lots in the past week were highly colored, and unless the matter is given attenton at once we shall have so much of this over colored stock on our hands that we shall not know what to do with it. Emphasize the fact that the best trade wants light colored butter. I don't mean by that chalk white though a few customers like such—but a delcate, light straw shade that has life in it. Such lots suit almost anyone. Now and then a buyer has trade for goods with more color, but this is the exception. You cannot make these points too strong, and now is the time for the butter makers to get busy."

"Accidents happen in the best regulated families," is a familiar expression that is full of meaning; and some strange things occasionally happen in some of the best families. Some two weeks ago I was asked to look at a shipment of butter that arrived that day from a western creamery—one of the best that comes to this market. The color was simply dreadful. Talk about barber poles, why they aren't in it with the appearance of that butter. We bored tub after tub and the trier showed a layer of very light color and then a layer or roll of almost red butter—enough coloring in it to taste very badly. What would otherwise have been a fine product, was ruined for table use and the whole shipment sold as packing stock at a loss of 10c. a pound. Several experts studied over the problem, and the conclusion was that the butter maker forgot to put the coloring in the cream before churning, and he discovered his mistake after the butter came. Effort was then made to color the butter, but it did not mix in satisfactorily and the entire churning, which was a good sized one, was very seriously damaged.

I am inclined to think that there are a lot of new butter makers in the creameries this spring, and some of them are not up to the best methods of packing their butter. Some of the defects that result from neglect or lack of knowknowledge are not serious, but they contribute to the appearance of the stock, and if the price is not affected a sale may be interfered with. One of the things that need attention is the proper lining of the tubs with parchment. Not infrequently I see a lot where the paper has been folded over so much on the bottom that no paper shows on the sides. No one would know that the tub was lined unless the butter was turned out. Others but the linen cup cloth on top before folding over the paper, and if a lot does not sell readily and has to be shown several times the edges of the paper becomes torn and the appearance is unfavorable. This latter complaint is so frequent that I want to call special attention to it. After the tub is well filled the paper lining should be folded over the butter about two inches, and then the linen cap cloth put on. This permits drawing back the cloth so that the butter can be bored without disturbing the paper. Keep constantly in mind the fact that a handsome appearance counts a great deal in almost any market.—N. Y. Produce Review.

Seventy Pounds of Milk Per Day.

In this busy age, when Canada is making a name for herself with big things, waterpowers, timber limits, railroads, real estate deals and so on, it is perhaps as well to remind ourselves that the ordinary farm operations occasionally show very big things. We hear now and then of poor cows and low yields of milk, so we need constantly to bear in mind that huge things are accomplished by the proper combination of the brainy dairyman, good feed and the selected cow. We have plenty of good cows in Canada, some that give 10,000, 15,000 and 20,000 pounds milk in a year. One or two big records were made in March by excellent cows, one lot of six in one herd giving a total yield of 9,388 pounds milk, and some giving as much as seventy pounds of milk in one day; think of it, enough to supply the needs of 56 ordinary people, at the rate of one pint each. Such cows are not picked up every day, they are not average cows, but they are an indication of what is being accomplished by brain work, applied intelligence in dairying. We need to realize that it is perfectly feasible to do a good deal more raising, not only the much needed raising of the general standard of the average cow, so that the 3,000 pounder is no longer "in our midst," but the raising of a good many more cows of at least the 10,000 pound type Dairy records, of milk produced and feed consumed will soon show which cow in the stable of the average dairyman is not worth keeping, and which will respond to more liberal feeding, so as to produce milk in abundance. Cow testing associations will help every dairyman to success; join the nearest to you or assist in forming a new one.—C. F. W.

Seven Stones in Herd Building.

1. MILKING CLEAN.—To obtain all that a cow can give, and to prevent early drying off.

2. THE USE OF PURE BRED SIRE.—From strain of large producers, to acquire good qualities and perpetuate dairy tendencies. Of what value is a "scrub ?"

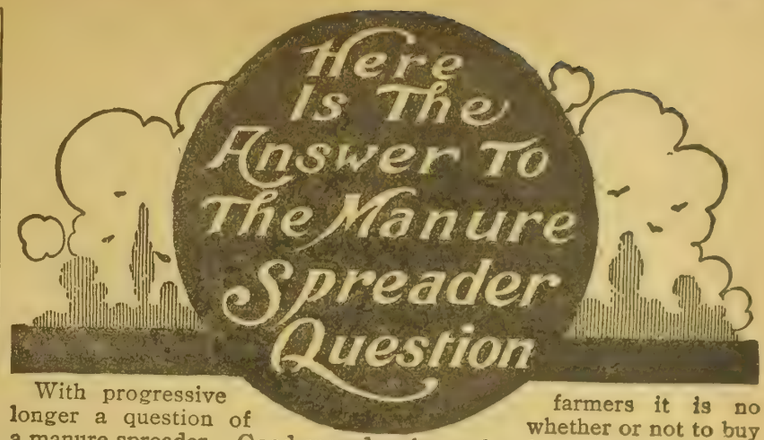
3. REGULAR AND CAREFUL FEEDING.—As to time, quantity and quality; adjusting the grain ration to the production of milk and butterfat; to get the utmost value for the foodstuffs grown or purchased.

4. PROVIDING SUCCULENT FEED.—As roots, ensilage and soiling crops, to sustain and prolong the flow of milk.

5. CULLING OUT POOR COWS.—No one wants them either to feed or breed from. Beef them.

6. GOOD CARE.—Including kind treatment, and everything conducive to comfort, cleanliness and health, so as to give the cow an opportunity to work to the best advantage. Better methods, not necessarily much outlay of cash.

7. KEEPING RECORDS.—All the foregoing naturally hinges on records; a knowledge of each cow's performance and capacity is the prime necessity for increasing profitable production, a mere estimate may be far astray and gives no basis on which to work intelligently; guess work is not business-like, but a careful record supplies information of the utmost value at every turn. Record forms are supplied free on application to the Dairy Commissioner, Ottawa.—C. F. W.



With progressive farmers it is no longer a question of whether or not to buy a manure spreader. Good spreaders have already proved their value. The real question is—which one will net you the most profit?

The I H C line answers that question. Among the many styles and sizes, you will find one that just meets your needs.

I H C Manure Spreaders

embody all that is best in manure spreader construction—all that makes for greatest manure profits. They have strength in abundance to withstand the hardest usage; they are simple, sure and steady in operation; they work perfectly with fertilizer in any condition; they are exceedingly light in draft.

I H C manure spreaders are made in three styles; each style is made in three sizes, ranging from 30 to 70 bushels capacity. Corn King spreaders are of the return apron type; Cloverleaf manure spreaders have endless aprons. Two styles of feed are furnished—either ratchet or double pawl worm gear. There is an I H C to suit each requirement—large sizes for large operations, medium sizes for the average farmer, small sizes for orchards, vineyards—for every condition. I H C spreaders have lime hoods to spread commercial fertilizers; drilling attachments to distribute manure in rows. Whatever I H C spreader you buy will pulverize and spread manure or commercial fertilizer perfectly. You will find it durable, and it will net you big dividends on your investment.

Manure is the cheapest and best fertilizer but it must be handled and spread right or most of its value is wasted. You must have an I H C manure spreader to get 100 per cent value out of the manure. I H C spreaders are doubling the crops of others. The one that suits your needs will do it for you.

See the local International agent, or write the International Harvester Company of America at nearest branch house for catalogue and full information.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
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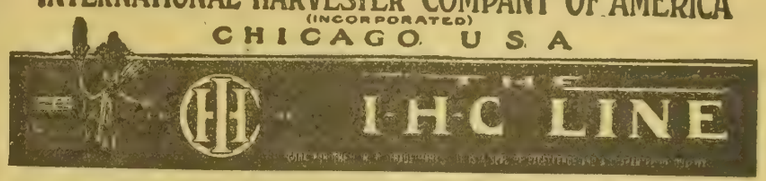


Running machine at Different Speeds, Results in Variation Tests.

The thickness or density of cream depends upon two things, the centrifugal force used, and the regulation of the cream screw. In the separation by careful force, the milk is thrown to the outside of the bowl, because it is heavier than the butter fat, the latter works in towards the centre and is known as cream; the nearer the centre the bowl the thicker the cream, providing uniform feed and speed are maintained.

Most separators have what is known as a cream screw that has an opening in the centre. When a thick cream is desired the screw is turned in, which carries the opening nearer the centre of the bowl, giving you a thicker cream.

Separators have different devices for the removal of the cream, but in all cases the nearer the outlet is to the centre of the bowl the thicker will be the cream provided the inlet of milk and speed are kept uniform.

The cause of the variations in tests, in most cases, is due to the variation of speed in running the separator, If the machine is run a little slowly or below speed the result is a lessening of the centrifugal force, consequently more milk will be retained in the so-called cream, which will mean a low per cent. of butter fat. In addition to this the separator will not run clean and the result will be that some fat will pass off into the skim milk.

The writer has, on a number of occasions, tested some samples of skimmed milk from different farms from separators that had been sperated at a low rate of speed and found the fat content in the skim milk to average over one per cent., or one pound of butter fat in each 100 pounds of skim milk.

Dairy Notes.

Butter milk destroys the keeping quality of butter.

Churn promptly when the cream is ready to churn.

Nothing else takes account of filthiness and holds to it like milk and butter.

Milk keeps better even in cool weather if cooled at once after being drawn from the cow.

LIVE STOCK.

Quality Principal Factor in Sheep Production.

Nothing else affects the price of mutton, or makes such a wide range of difference between one bunch of lambs and another, as quality. One breeder breeds for high quality and makes a great success of the business, while another breeds sheep just because they are animals with that name and wonders why he does not make much money.

When producing mutton lambs for market, good quality uniformly throughout the lot is required in order that a high price be obtained The day has gone by when sheep are sold in mixed lots of all sorts. At the present and in the future, all sheep and lambs are and will be sold according to their real merit. Medium size and good quality will always bring a better price than the others. Whenever the market goes up, it is this sort that makes top figures and it the market sags a little it is the best that holds good.

A great number of sheepmen have in their sale bunches a few good ones, but to have the whole lot uniformly so is another thing. Uniformity is necessary to have a bunch of sheep bring a good price, and it must be in size, type and conformation. A few big lambs mixed with smaller ones, or the light and loose fleeced ones mixed, or the thick compact ones mixed with long-legged narrow kind, would not be very inviting to a buyer.

The requirements of a sheep buyer are much different than twenty years ago, and it is now for a better sheep, and it is well that it is so.

All who are interested in sheep production today know the vast difference in price between the common sort and the good ones. To produce the very best should be the desire of all who raise mutton sheep. To do this several new practices will have to be introduced. None but the highest class of registered rams can be used, if good results are to be obtained.

The reason that there are so many "fair to good" and "common" lambs on the market is that the breeders behind the scene have been careless in their breeding operations. Grade rams have been used, and the results in the end are most unsatisfactory. A grade ram can never prove to be really as good a breeder as the high class registered one. The grade may appear very well himself, but perhaps his ancestors have been very inferior animals. These undesirable characteristics will be in evidence in his produce. A continuation of this practice means that your lamb crop will soon be a "mixture" and will not sell as well as they should.

On the contrary, if the use of registered sires is continued each year makes your flock better and profits it greater. It is to go against the world's live stock men to say that the use of grade rams is anything to compare with the use of good registered ones. Improvement in the sheep of the world has been brought about by careful breeding, and greater improvement can be made in the future by a more combined effort to do away with the low class sire.

Such use is rapidly becoming a thing of the past, because everyone sees that the most careful man in his breeding operations is the most successful farmer. Yet, at present, there are large numbers of sheep men on the North American continent who use the ram that is easiest to obtain. As long as such conditions exist the general quality of the sheep will not be just what it should.

If you have in the past years, been easily satisfied with a ram, this year get a good registered one and see what the difference will be in your lamb crop. Don t buy a sire from most anyone just because it is registered, but apply to an old reliable breeder and get a good class of sheep with the very best breeding. A grade producer can also pay attention to type because a ram with good type and breeding is the only sort that sires the lot of lambs to be "alike as peas."

Do not think that just because you produce sheep for the market that your breeding flock needs no attention. Apart from the continuous use of good sires it is well to cull the breeding flock each year. Send to the butcher the ewes which have produced the undesirable lambs. Replace them with some of the top young ewes from last year's crop of lambs. By such methods of breeding you would soon have a better and more uniform flock than you had thought of a few years previous—HOWARD A. CHANDLER in Coleman's Rural World.

Sheep on the Farm.

G. E. Day, professor of agriculture, O A. C., Guelph, is a great believer in sheep and in a lecture on the subject said:

"I do not think it would be wise for every man to keep sheep, for the reason that in order to be successful with any class of animals, a man must have a love for them, and if a man does not like sheep he would not be likely to make a success of them. There are several things about the sheep, however, which makes them especially well adapted to occupy a place on almost any farm, and I shall attempt to place these points before you as briefly as possible.

(1) Sheep will eat a great many kinds of weeds which other animals will not touch. This makes them especially vauluable about a farm as a sort of scavenger.

(2) They will live on very poor pasture where many other animals would starve. Their activity enables them to travel long distances in search of their food, and the formation of their mouth is such that they can bite very closely to the ground, enabling them to gather a living from the poorest soils.

(3) Sheep require very inexpensive buildings. Almost any sort of building will answer the purpose so long as it protects them from storms in the roughest weather, and is reasonably dry and free from draughts. There is no farm animals for which cheaper buildings are required.

(4) There is comparatively little labor involved in taking care of a flock of sheep. I do not know of any animal that requires less labor in its feeding and management.

(5) They grind their own grain, which is another factor which adds to the cheapness of their maintenance. They are the best grain grinders which we have, and the weed seeds consumed by sheep are never known to grow afterwards. This is not true of other farm animals.

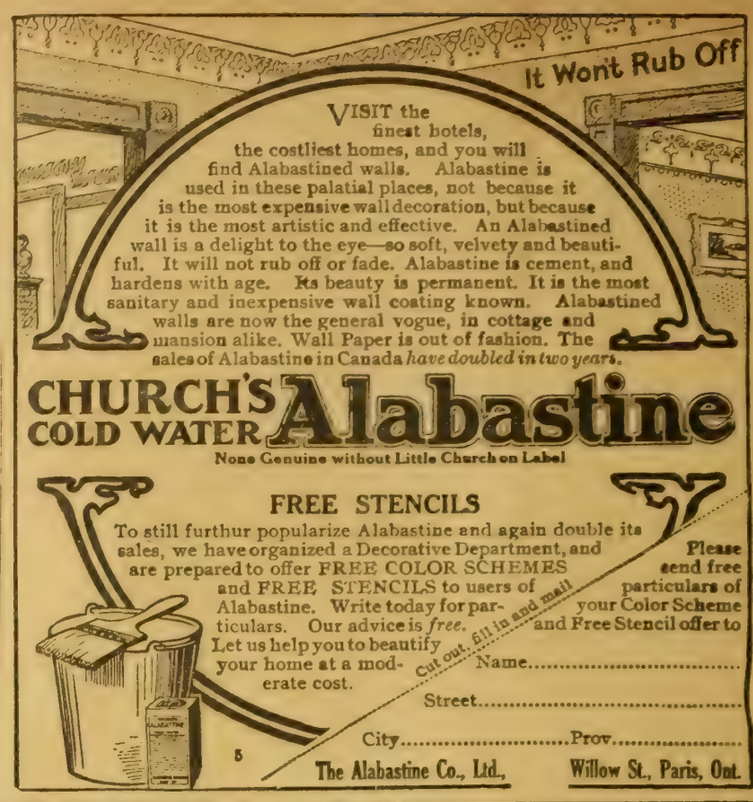
(6) They are economical producers of meat. There has been a good deal of experimental work in connection with this matter, and it is generally estimated that to produce a pound of increase in weight a sheep requires from 8 to 9 pounds of dry matter, in its food, whereas a steer requires some 12 to 14 pounds of dry matter. This shows that the sheep is a very much more economical producer of meat than the steer, and it also compares favorably with the pig, especially during the early period of its growth.

(7) The sheep also gives to products in a year, namely wool and lambs, both of which have a ready market.

(8) While it is true that sheep are more liable to sudden death than some other farm animals, at the same time, the amount of capital invested in a sheep is small and losses of this kind are not serious losses after all.

But while the sheep has so many things to command it, I do not think it would be wise for the average farmer to stock his farm heavily with sheep, neither do I think it wise for him to go to the other extreme and dispense with sheep altogether. The sheep is eminently well adapted to fill in a peculiar place on the farm, making an economical use of products which would otherwise be wasted, and constituting what might be called an important side issue in the business of farming. The cost of maintaining a small flock of sheep is comparativily trifling and the returns they make add materially to the revenue of the farm.

The trouble with many is that if we cannot go into something on a larger scale we do not wish to touch it at all and I believe that if in many cases we had fewer sheep, fewer hens, and fewer hogs and had them looked after better, it would be to our advantage. There is no reason why the sheep should not be increasing the revenue from many of the farms of this Province where at present no sheep are to be found and we believe that the farmer will find the sheep are one of his best friends if reasonable intelligence is used in its management.


It Won't Rub Off
VISIT the finest hotels, the costliest homes, and you will find Alabastined walls. Alabastine is used in these palatial places, not because it is the most expensive wall decoration, but because it is the most artistic and effective. An Alabastined wall is a delight to the eye—so soft, velvety and beautiful. It will not rub off or fade. Alabastine is cement, and hardens with age. Its beauty is permanent. It is the most sanitary and inexpensive wall coating known. Alabastined walls are now the general vogue, in cottage and mansion alike. Wall Paper is out of fashion. The sales of Alabastine in Canada have doubled in two years.
CHURCH'S COLD WATER Alabastine
None Genuine without Little Church on Label
FREE STENCILS
To still furthur popularize Alabastine and again double its sales, we have organized a Decorative Department, and are prepared to offer FREE COLOR SCHEMES and FREE STENCILS to users of Alabastine. Write today for particulars. Our advice is free. Let us help you to beautify your home at a moderate cost.
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Cuts and Wounds.

Would you kindly allow me, through the columns of your widely-circulated paper, to draw the attention of your readers and brother farmers to the benefits of using powdered alum in cases of cuts and wounds of all kinds on live stock? I could give instances of almost incredible cures from its use, especially on sheep torn by dogs. It is equally valuable for use on horses and cattle. In treating, fill or cover the wound with the powdered alum, which can be had at any drug store for about fifteen cents per pound. Keep it always on hand. It would save the farmers and stock-owners of the world much much loss annually were its value more generally known.

There is also a disease known as joint-ill in colts, which carries off thousands annually, and a similar trouble in calves from infection through navel just after birth. All of such losses can be averted by washing the colts and calves as soon as possible over and around the navel cord, with a weak solution of carbolic acid and some good antiseptic; or if those are not available, rub on powdered alum.

Before taking those precautions I lost several head, especially calves, which generally died with scours in a few days after birth. Since taking those preventive measures we have lost none. I know of no case in which the old adage of an ounce of prevention being better than a pound of cure will be more clearly exemplified. Try it and be convinced.—Farmer, Pictou Co., N. S.

What Does it Cost to Raise a Calf?

This calf was born Sept. 1909 Breed, Grade Holstein.

The grain mixture consisted of 2 parts bran, 1 part cornmeal and 1 part linseed.

The skim milk valued 25 cents per 100 lbs.

The whole milk was 12 lbs a day for first 7 days, testing 6.2 per cent.

Price of butter fat was 33c per lb.

Hay was second quality valued at $10.00 per ton.

COST FOR FIRST SEVEN MONTHS.

	Whole milk	Skim milk	Hay	Grain	Weight	Cost
*27 days	84 lbs.	320 lbs.			108 lbs.	2.48
Nov.		480 lbs.	6 lbs.	3 lbs.	131 lbs.	1.27
Dec.	calf tonic 15c	496 lbs.	31 lbs.	9 lbs.	170 lbs.	1.78
Jan.		480 lbs.	90 lbs.	9 lbs.	211½ lbs.	2.38
Feb.		360 lbs.	120 lbs.	9 lbs.	263 lbs.	1.65
Mar.		366 lbs.	210 lbs.		310 lbs.	1.95
Total	84. lbs.	2496 lbs.	457 lbs.	30 lbs.		$11.51

*First column across is for first 27 days up to Oct. 16th.

Calf had 16 lbs. skim milk a day for the 20 days up to the 16th of October. Whole milk for first 7 days.—A. G. WALKER, in Main Farmer.

Dairy-Bred Beef Animals.

The following from the Tribune Farmer is the summary of an address by Prof. Clinton D. Smith, Michigan Agricultural College, on the dairy breed for beef purposes. The facts cited are interesting, if true:

We turn next to a consideration of the dressed carcass and ask the steers whether, on the average, beef bred animals give a higher percentage of

high-priced cuts than do Holsteins. Here we are forced to find a state of facts existing quite contrary to our preconceived ideas, and, in fact, quite contrary to judgment of the markets—facts which seem to relegate that judgment to the realm of unwarranted prejudice. Let me quote one instance of an experiment conducted at the Iowa Station, in the very heart of the cattle-feeding area of the United States. At this station Shorthorn and Holstein steers were fed, and when fattened sent to the Chicago yards for slaughter and subsequent examination. Let me quote the results of that test from Henry's "Feeds and Feedings," page 377, the work being reported in the Iowa Experiment Station Bulletin No. 20.

Percentage of the various cuts of the dressed carcasses of the Holstein and and Shorthorn steers:

Loins	17.1	16.6
Ribs	9.9	10.2
Rounds	22.9	23.3
Chucks	21.1	21.9
Plates	15.1	14.2
Lnanks	5.7	6.4
Minor cheap parts	7.9	7.4

I submit that these figures indicate no superiority on the part of the beef breed as far as yield in percentage of high-priced cuts is concerned.

Swine Feeding an Art.

By the judicious use of foods, many swine disorders may be prevented or cured. To prevent scours, feed a slop made of crushed oats and barley, after running it through a screen to remove most of the hulls. If put in a small trough in a corner, the pigs will eat it greedily. Every litter of pigs should have a box in one corner containing wood ashes, charcoal and a little salt and sulphur. Fall pigs, that are to make their growth before the next July, have a greater struggle before them, and their rearing demands greater care on the part of the feeder than if they were farrowed in the spring. After removal from the sow, give warm, new milk for the first meal and later, warm the skim-milk and put in a handful of shorts, slowly increasing the latter as the pigs get used to it, until it is as thick as thin porridge. To assist growth nitrogenous foods are essential. For this purpose nothing is superior to oil meal or linseed meal. A quart of it, well stirred in a barrel of the slop, is sufficient. After the pigs are three months old, make a feed of shorts and either crushed wheat or barley. Always let out the pigs to air unless the weather is too bad. If they can have a place to run, where the wind is kept back and the sun pours in, they will prefer to be out-of-doors most of the time while the sun shines. When the swine are five months old, it is well to introduce some corn food, as now they begin to approach the end of their career. Make the mixture of corn, crushed barley and shorts in equal proportions and feed all they will eat clean four times a day. At six months old they should weigh 180 to 200 lbs. each. A few sods dug and stored in the fall and given to each pen occasionally will be eagerly received. The pigs seem to like to work on them and it makes them strong. Thumps, a disease of the heart and digestive organs, is prevented and cured by a loosening diet and increased exercise.

For spring pigs have ready a field that is long and narrow, that the little fellows may be forced to run long distances two and from the feed trough. As soon as the grass is up well put them in, but arrange a dark sleeping place where they may go in frequently and snooze, as all young animals need much sleep as well as exercise, if they do their best. Do not let the sows run with the pigs but keep them in a separate place. The latter must be fed grain as well as grass to keep them growing. Crushed barley and shorts mixed with skim-milk or buttermilk in the proportion of one pound of grain to three pounds of milk is about right for the best results. Only a modest feed three times a day to stimulate the appetite is needed, in fact more should not be allowed, or the pigs will not graze at all and will not do so well. The advantages of grass in summer is that it may be fed in connection with the milk. The size of the pasture will depend upon the growth of the feed and the kind. Clover is the best. If the green feed is seen to be getting short, the pigs should be put in another enclosure for a time. The use of hurdles that new land may be utilized constantly, changing them every week or ten days is a most desirable practice. Such hurdles are easy to make. Each one requires a scantling or pole 12 to 16 feet long, to the ends of which are bolted a cross piece 4 feet long. Now across one side of this great letter I, stretch a stran of hog wire, fastening it securely. Across the other side strain another strand of the same wire and let it be held so securely by the staples that the wire will sing like a violin string, if picked. Here is a skeleton of the hurdle, three sticks bolted together and wire so all is tight. Now cover it firmly with strong net. I have found that poultry net will do for little pigs, but after they are three month old they must go into hurdles made of heavier net. The net must lap on the ground 1 ft. so that it will get tred into any unequalities of the surface and so prevent the mischevious little fellows from working under. These hurdles are kept in place by tying them together on the plan of a Virginia rail fence.

Or they may be kept in shape if wired at each end to a stout stake set in the ground by the use of a crowbar. It is interesting to note how soon a fresh acre may be enclosed by two men when changing the hurdles. Somebody rises up and says, "These hurdles have no bar across the top of the fence." None is needed. If a pig stands up to investigate them, he rests his feet on the long part to the letter I, and above is nothing but the uncertainties of the net. In consequence he returns to all fours and his feed. For lightness and strength there is nothing better.

Why Insurance?

Have you ever considered "Painting" from the standpoint of an insurance policy?

The premium represented by the cost of painting is in proportion to the importance of the security afforded, no higher than other insurance; in fact it is considerably smaller, and soon becomes a minus quantity.

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Prevents *dry rot*—checks *deterioration.* No *safer, surer* or *more reliable* insurance could be offered.

If your dealer cannot supply you, notify us and we will gladly direct you to where our paints are to be had.

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Pioneers Pure Paint

Weaning Calves.

We have been working for several years trying to find how to wean calves without stunting them. I think we have found something good and would like to pass it along. Our idea is to wean the calf early, when there is plenty of green feed. The middle of August is the best time. We planted a few acres of sweet corn, which we snap and slice shuck and all; they will begin eating this sooner than anything else we have ever tried. By winter they are great lusty fellows, ready for anything. The mother though reaps the main benefit. She has two months of green feed in which to fatten up and get ready for cold weather. Then, as soon as her udder-full of milk, after weaning the calf, is taken up by her system, she will come in season. I think fully 95 per cent. will breed within 10 days.

This you see will bring your calves all before May 25th next season ready to wean by the middle of August again. To show the success of this method, in 1903 from 25 cows we got 22 calves; in 1904 from 28 cows, 28 calves. Through these years our losses have been at least 50 per cent lighter than our neighbors,' for the risk on a fat cow at calving time is almost "nil."—F. L. WINLAND, Franklin Co., Neb.

To Prevent the Growth of Horns.

For several years caustic potash has been used at the University of Wisconsin to prevent calves from growing horns. G. C. Humphrey, Professor of Animal Husbandry, gives the following method, which has been very successful:

The caustic potash should be applied as soon as the "button-like" horns can be felt after the calf is three days old. If postponed, the operation may give unsatisfactory results. To apply the potash, the hair is removed from about the horns, close to the skin, which covers the point of the horns until the skin is white.

It is not necessary to rub the skin until blood comes, as this will cause unnecessary soreness. One such treatment is usually sufficient to prevent the growth of the horns.

The following precautions should be taken: The caustic should be wrapped in heavy paper to protect the hands of the operator; the caustic should not be moistened too much, so that the liquid will run down the side of the calf's head, for this will cause unnecessary pain; the calf must be securely fastened so that the head may be held still to avoid applying caustic anywhere except over the horns. One stick of caustic potash, if preserved in a tightly corked bottle, will serve to dehorn many calves.

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It is known the world over as the one certain, reliable remedy for Spavin, Curb, Splint, Ringbone, Bony Growths and any Lameness.

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Orangeville, Ont., Dec. 21, '08

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Breast Collar—Single strap.

Traces—1¼ wide; heavy single strap lined at both ends; sewed to breast collar.

Saddle—2¾ in., full padded; patent leather; swell skirts.

Breeching—Well made, with flaxseed stuffed cropper.

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THE HORSE.

Bran Mash for Horses.

Ever feeder of horses that understands the digestive system of the horse makes use of the bran mash at least once a week to regulate the action of the bowels, to relieve the system from heavy feeding, and at the same time to cool it out. The regular feeding of the bran mash on Saturday evening saves many horses from constipation and also from lymphangitis or Monday morning disease. While the bran mash alone may not prevent the latter trouble, it helps very much in doing so, and if, besides, the feed over Sunday would be reduced to one-half the usual amount, there would be few cases of disease occurring. The bran mash, having a cooling and laxative effect upon the system and the bowels, relieves the lymphatic system, which under heavy feeding of dry, carbonaceous feeds, becomes sluggish and overcharged. It is due to the latter condition that lymphangitis takes place and manifests itself in swelling of either one of the hind legs accompanied by lameness.

HOW TO MAKE THEM.

Bran mashes are made up in many ways, but as a rule it is only in large feeding stables, studs and racing stables that they are made up properly. A little cold or luke warm water poured over the bran in a pail or in a large feed can and mixed, with a little salt added is the usual bran mash Frequently hot water is used, and sometime it occurs that the mash is given to the horse so little cooled off as to scald its mouth, or the horse refuses to eat it and it is left to sour in the manger. The cold or luke warm mash is better than none, but the latter kind is worse than none.

Two properly prepare a bran mash covers more than a mere few minutes of time, and the mixing of the water and the bran. At noon put the boiling water into a clean bucket and into this stir the bran. Then put a cover over the bucket to keep in the steam so that the cooling off takes place slowly and prevents souring at the same time. Then feed in the evening when the bran has been well acted upon by the steam and has cooled off enough to be readily taken by the horse. Whenever salt is to be added to the mash, add it at the time when the mixing is first done.

LINSEED MEAL AND BRAN.

It may be desired to have the mash consist of a mixture of linseed meal and bran, and often this is prescribed by the veterinarian in special cases. To prepare such a mash, one part of linseed meal should be usee in two parts of bran. This should be cooked for several hours by allowing it to simmer slowly on a stove with a low fire. Plenty of water should be added and the cover kept on the containing vessel until the cooking is almost completed. Then the cover should be removed and the water allowed to evaporate so as to make a thick mash, when the latter should be taken off the stove and allow it to cool ready for immediate use.

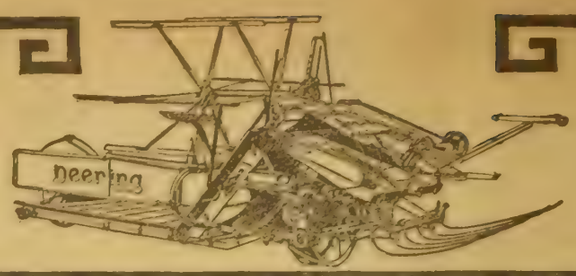
The amount of bran mash fed to each horse will depend upon its size. A horse 1,600 pounds in weight will easily take eight quarts. Driving horses should be fed bran mashes on evenings previous to days of hard driving unless driven a good deal every day. Horses that are worked hard every day and are not allowed any pasture at all do better if given bran mashes twice a week—Wednesday and Saturday evenings.

Unsoundness in Horses.

Mr. Jackson recently made a bold proposal to the council of the Shire Horse Society. It was nothing less than a suggestion that after a certain date an animal should not be eligible for entry in the Stud-Book "unless its sire is certified free from hereditary disease by a veterinary surgeon appointed by the society during the year immediately preceding the birth of such animal." The suggestion has been set aside by the council as impracticable, and this may be a fair comment. But it lies with the council to show how it is impracticable, and in any case the general question should be discussed in all seriousness. One object of the Shire Horse Society is "to promote the distribution of sound and healthy sires throughout the country;" and it is alleged by a writer, in the Manchester Courier, that "a great many members of the society have found out that willingness to pay a high fee for horses with a name has not ensured their having the use of sound horses."

This is a serious ground of complaint for breeders, and possibly it is not confined to breeders of Shire horses; but the great question is, How best to secure the distribution of sound sires? The Shire Horse Society is blamed for supineness in this matter. It is flatly declared that "twenty years ago, when the boom was on, the Yankee were pretty well bitten," and now they are shy of Shires, which have still the reputation of being "soft" horses that will not "wear." This reputation is based on sound premises, and it is the business of Shire horse breeders to remove its foundation.

But, in respect of the main question, the promotion of soundness in breeding



GET ALL THE CROP THIS YEAR

THINK back to the last harvest time. Did you get all the profit from your acres that should have been yours? Or through delays, caused by tinkering with broken-down or inefficient machines, did you lose valuable time? Did you get all the grain—tangled or down—or did your machine leave a part of your profit in every field? Ask yourself today. Did I get the best results possible from my harvesting machines last year, and, if so, are they in condition to give me the same service this year? If not—

Now is the time to choose the machines that will get all the crop this year in the shortest time—with the least effort on your part. That means the Deering. They are machines that will give you the very best service. They are built to meet the conditions encountered on Canadian farms.

The Deering binder is a model of convenience for operating. It is a strong machine. You will not be troubled with breakages. It has light draft and has such a wide range of adjustment that it is adapted for all conditions of grain and fields.

You will be sure of satisfaction with a Deering. It is a proved machine. In addition to binders, the Deering line comprises various other machines in harvesting and haying machine lines, seeding and tillage implements. The Deering local dealer handles I H C gasoline engines, cream separators, manure spreaders, wagons, hay presses and motor vehicles.

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I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

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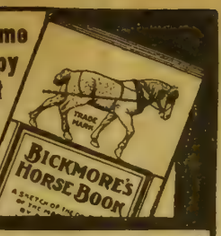

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horses, the same charge of supin eness lies at the door of the Highland and Agricultural Society. The recommendation from the East Lothian Farmers' Club was at last meeting passed by without comment. The subject is not worthy of the consideration of the Board of the national society of Scotland. It exists, one would think, for some other reason than the promotion of what is to be beneficial to agriculture. Holding a great annual exhibition of stock and implements is excellent, but it is not enough.

Nothing is of greater importance than the distribution of sound sires throughout the country, and, as we have frequently pointed out, the Highland and Agricultural Society can give a more effective lead in this matter than any other body in Scotland. It can, with a minimum of trouble, ensure that, so far as human skill can determine the fact, only sound sires will be hired with premiums subsidized from its funds. That this suggestion, with others that are kindred, should be deemed unworthy of consideration by the national agricultural society of Scotland suggests that that Board is dominated by the influence of those who are acting in the interests of owners of entire horses, and not in the interests of the far larger number, who are users of these horses. There is need for a strong man to give a strong lead in this matter, as was done by the late Mr. Speir in what affects dairy farming.—Scottish Farmer.

Adjusting Hames.

A subscriber writes:—"Could you give a diagram showing the best height to have the hames adjusted so that the right pull will be obtained on a horse's shoulders. The extra leather usually seen on collars, presumably to take the wear off the face, seems rather low."

A diagram would aid little in answering this question. The point is well taken, however, and many horses are spoiled by being forced to pull with traces fastened to hames at a point too high or too low. The bony structure of the horse's forequarters is different from that of most animals. The shoulder blades are not attached by any joint to the rest of the skeleton, but simply by a pad of cartilege. In the ox the shoulder blade articulates with the skeleton by means of a joint. At or a little above the point of the shoulder is where the strongest support is found and if a horse has a proper slope of shoulder the point of pull should come near one-third of the distance from the lower part of the shoulder to the top. One reason for having horses' collars heavy as they are is to equalize the pull so that it will not all come on one point. The stiff hames also help to do this. The slope of the pasterns will be found to compare with that of the shoulders. It is frequently noticed that a horse with straight pasterns is also straight in the shoulders and in such a case no amount of adjustment will make up for the lack of proper slope. When a horse is hitched and pulling, the pull, as shown by the direction of the traces, should be as near at right angles to the shoulders as possible. Most hames admit of a certain amount of adjustment and whether the trace attachment to hame comes over the extra leather piece on the collar is not so important as it is to have the pull come right. Improper adjustment here often causes sore shoulders.

Navel-Ill in Foals.

Now that the season is here when the foals are being born, breeders ought to be on their guard against the action of that most fatal malady, navel-ill. It is a germ disease and usually attacks the foal during the first few weeks of its life. The starting point is infection of the navel wound by dirt from floor of stable or other surroundings.

The symptoms of the disease are fever, loss of desire to suck, a swelling in the joints, seen in the knee, hock, elbow or shoulder. The swelling is hot and painful and will sometimes pass away for a time, but only to appear again. Abscesses will form and discharge pus. The patient will be very lame and will be down most of the time and it will get very thin and weak.

Curative treatment is not usually attended with much success. Most of the patients will die and those that escape death often do not amount to much, being unthrifty and they often develop disease of the bone later in life. But while curative treatment is unsatisfactory, preventive treatment is very successful and easy. As soon as the foal is seen after birth, the navel wound should be smeared over with a 10 per cent. solution of carbolic acid, this treatment being repeated at least once a day till the parts heal over, after which there will be no danger of infection from that quarter. About a week or ten days' treatment will usually be sufficient.

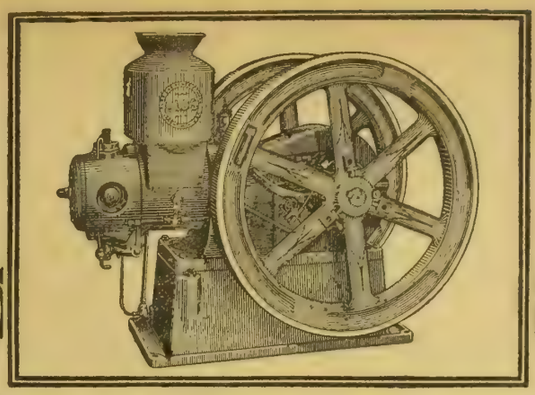
This simple preventive treatment has saved thousands of foals and no farmer should neglect to provide himself with carbolic acid beforehand and be ready at the birth of the foal to adopt the treatment.—VETERINARIAN.

Sore Shoulders and Backs.

On all horses put to work in the spring without previous exercise and more or less hard work the shoulders and neck will be tender and, as usual, the horse in every respect will be in preparation for his task of putting in the spring crop. His body is covered with a heavy winter coat, which causes him to perspire easily. The first farm work in the spring is the hardest of the year and at this time a horse is in the poorest condition to do the work without injury to himself. The shoulders, the neck, and the back become bruised and sore.

Too much care cannot be exercised in seeing that the collar is a perfect fit. A collar that is too large is more likely to injure the horse than one that is too small. The collar should be scraped every morning and carefully cleaned before it is again put on the horse. Before the spring work begins. it is well to oil the harness and have it soft and pliable. For the first fiew days of hard work on soft ground, the shoulders of the horse should be bathed in cold water every night after the harness is removed. The horse will be very sore and tired for a few days and should be given every kind of attention. Watch the hames to see that the draft is at right angles with the shoulders. If it is too low, the collar will be continually "kicking up" at the top and if there are any calloused lumps on the horse's shoulder or back, they should have been removed during the winter when his services are not much needed. If the collar is put on over one of those "sit fasts," it will have the same result as a man trying to walk with a button in his shoe or a bunion on his foot.

This story is not for the purpose of suggesting treatment for bruised shoulders and sore neck, but just simply to remind you that prevention (by having the horse and the harness in good condition before beginning the spring work) is often worth pounds of cure later on when the horse is disabled and you are deprived of his services, for weeks, right in the busy season—GEO. H. GLOVER, D. V. S., Colorado Agricultural college.



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Feminine Horse Wisdom.

If I were a man I would be ashamed to crowd a horse in a narrow stall, with no chance to straighten out his limbs and lie in comfort, and I would not allow a barn to go for days without being cleaned out.

I wouldn't be so afraid of using the curry comb and brush as some men are.

I would look after the noble horse's bed and see that he had plenty of good dry straw.

No horse of mine, if I were a horse owner, should be allowed to stand out in a storm or in a cold wind or draught in a stable.

I would have harness and collars to fit each horse and the horse's feed I would change often, for his appetite, like that of the human family, demands a change.—FANNIE M. WOOD.

A Practical Test for Stallions.

Before closing for the services of a stallion, suppose, says Farm, Stock and Home, you ask the owner how much his horse can pull, and then notice his look of blank amazement But why not ask it? The dairy sire is selected in large part on the strength of the producing record of the females of his family, the beef sire for typical beef conformation, the trotter because of his actual track performances. Why should the drafter be the sole exception to this practical consideration? Why not expect from him actual performance in the traces—stamina, strength, reliability? Why depend solely upon size, which may be misleading and upon fat, which has little or no merit in the trace chains?

Enlarged Hocks.

Enlarged hocks in young horses frequently are due to sharp strain upon that part of the leg. Two stallion colts running together indulge in rough play as yearlings, especially if they are well fed, and one of the results is swollen hocks. Separate the high spirited youngsters and nature will effect a cure. Speaking of spavin, Robert Bonner said: "It is brought about by the gross neglect of the people, whose duty it is to look after horses. It is absolutely impossible for a horse to throw out a spavin unless he is too long in the toe." Mr. Banner never failed to urge the necessity of keeping the feet level. His eye was remarkably keen and his study of form and motion enabled him to detect faults not apparent to less gifted men. He could tell at a glance when a horse was out of balance and he was never at a loss as to the remedy. There are thousands of yearlings on the farms of the country, whose feet need attention right now. Danger lurks in the long toe. Spavin developed by accident is not transmissible. The wise thing to do is to avoid the cause of spavin.

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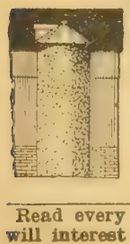

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POULTRY.

Raising Turkeys.

Young and growing turkeys are more easily influenced by their surroundings than any other class of poultry, and thus the weather during the early stages of development is an extremely important matter. While we cannot change the weather, we can do a great deal to counteract its evil effects, and by providing plenty of shelter and shade from rain and sun we can make ourselves, to a limited extent, independent of its vagaries. Complaints were rather common a few weeks ago concerning the scarcity of eggs but a great improvement occurred in this respect during May, and on most farms the stock of young birds has been well maintained. In a few districts rather a large proportion of the early eggs was infertile, and where this has happened turkey chickens are rather scarce, and in some instances backward.

SUITABLE CONDITIONS ESSENTIAL.

As already mentioned, it is of the utmost importance to select a place for the raising of turkeys that is favorably situated, since they are so very easily influenced by their surroundings. So important a factor towards success is this that I should strogly recommend those who live amid unsuitable surroundings to leave this branch of poultry-keeping alone, for if they persist in their efforts failure is almost certain to ensue. Even if the chickens are reared to killing size they are rarely satisfactory. They may be stunted in growth, or it may be that they have involved so much trouble and expense to rear that they have more than absorbed their profit. A heavy clay is unsuited to turkeys; so is a low-lying place, as in this case the atmosphere, as well as the soil, is likely to be heavily laden with moisture, and damp is fatal to turkeys, particularly quite young birds. A very cold situation, exposed to all the winds that blow, is also unfitted to this class of work, though of the two it is more favorable to successful rearing than is a clay soil or a damp position. I have many times seen a flock of young turkeys, apparently enjoying excellent health, upon very high, exposed land, but possibly an extra hardy strain had been obtained, or else the poultryman was particularly clever at his work. There are so many lucrative branches of the poultry industry that can be carried out successfully amid somewhat unfavorable surroundings that it seems a mistake to attempt raising turkeys which are, at the best of times, by no means hardy birds.

FACTORS TOWARDS HARDINESS.

A great deal of the common delicacy of turkeys—and it cannot be denied that very frequently they are extremely delicate, — is due of the Black Norfolk variety—is due to two errors in the mating of the mating of the parent stock. The one is that young parents are depended upon to much too great an extent. Turkeys are really very slowly developing birds, and full maturity is not reached until they are nearly or quite three years old. It is therefore, a mistake to use both parents much below this age. If a young male bird is used the hens should be in their third season, and vice versa. The other reason for the common delicacy of turkeys is that so much inbreeding has been practised in the past, a great mistake when utility points are the main object, or when the poultry keeper does not know exactly what he is doing. Breeding from related stock is essential sometimes, but it is quite unnecessary in the case of turkeys. It should only be practised when there is no other alternative; such, for instance, as in the case of forming a new breed, or a new variety of an existing breed, or in establishing a new color, but for ordinary purposes it is not only unnecessary but it is more often than not absolutely harmful. If matured parents are used, and no in-breeding is allowed to take place, it is only slightly more difficult to rear turkeys than other classes of poultry.

THE GROWING BIRDS.

Up to the age of about eight weeks, when the process known as "shooting the red" takes place, turkey chickens require a great deal of attention. For one thing their crops are smaller than those of ordinary chickens, and feeding must take place more frequently. It is very important, too, that the youngsters are never allowed out on to wet grass, especially if it be at all long, as wet feet has nearly always a harmful effect upon their development. A run should therefore, be placed around the coop so as to prevent their wandering away. Once the birds have "shot the red," however, they have passed the most critical period of their lives, and their treatment does not differ very materially from that of other kinds of domestic fowls. While they are passing through this somewhat trying stage they require particularly careful looking after, as for the few days that the red is making its appearance any inattention on the part of the poultryman may have the most serious consequences. Nutritious foods should be provided, and, most important of anything, the birds must not be permitted to get wet. If the weather is bad they should be kept under cover during the entire period. More really depends upon the quality of the food supplied than upon the quantity. Biscuit meal should be liberally provided, well soaked in hot water, and given to the birds in a warm state. A liberal supply of green food and pure drinking water are likewise necessary.

FREEDOM ESSENTIAL.

It is next to useless attempting to keep growing turkeys, in confinement, since they rarely thrive well under such conditions. Not only is development considerably retarded when the birds are confined in small runs, but they are less healthy altogether, and they cost more to feed, as they are able to obtain practically no natural food for themselves. There is nothing upon which young turkeys thrive so well as upon natural foods, worms, grubs, insects, etc., and only are they able to obtain these when they have a free range. Keeping growing turkeys in confinement has often been tried, but never, so far as I am aware, with anything approaching success. Until the hay is removed space is often somewhat limited, and it is necessary to keep the turkeys within perhaps a comparatively small area, but as soon as hay making is over the birds should be allowed to wander about as much as possible. The soil is particularly abundant in animal and vegetable life for the few weeks after the grass is cut, as no stock has been upon the land for so long. After the grain is cut, too, turkeys should be given access to the stubbles, and when this is done the birds can pretty well support themselves upon the natural foods they are able to obtain. Every penny that can be saved through reducing the food bill is a penny earned, and only by exercising the utmost care in this direction is it possible to make turkey raising pay well. At the same time, cheapness in feeding is by no means the only consideration, as it is false economy to stint the birds of anything that is necessary. Such good prices are obtainable at the Christmas season that one can afford to feed the tur-

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keys well. It is extremely important to give the growing birds plenty of shelter during hot weather, as too much sun has a very bad effect upon their health and development. An abundant supply of pure, fresh drinking water should be available at all times, and this, too, should be kept away from the direct rays of the sun. Green food and grit are necessary, the former to maintain the blood cool and the organs healthy, the latter to assist in the proper assimilation of the food.—E. T. B. in Farm and Home.

Eggs for Hatching.

It is a well-known fact that eggs for hatching sent by post or rail frequently give poor results. The fault lies sometimes with the eggs, but still more frequently with the system of packing adopted. The aim should be to avoid not only broken shells, but also to prevent injury to the delicate membrane enclosing the yolk, as an egg may be completely spoiled for hatching without a trace of fracture appearing on the snell. This can be prevented by using a package of moderate size and weight.

Of the many patent egg boxes some of the best are too expensive, others are too small, and a still greater number too fragile. The popular cardboard boxes are objectionable. They undoubtedly save labor in packing, and are light in weight, but their inital cost, the number of breakages that occur whenever they are used, and the make of these boxes an expensive item for the small poultry keeper.

After trial of many different kinds of package, nothing had been found to compare with a plain wooden box 11x7½x3½ inches (outside measurements) made of the very lightest boards.

To pack a dozen eggs, a layer of hay is placed at the bottom of the box. Each egg is first placed in a piece of newspaper and then in a strip of soft hay, after which it is placed on end in the box. A box of the dimensions given holds twelve eggs in four rows of three eggs each. It is most important that the eggs should stand on end, and that they should be so tightly packed that they cannot move when the box is roughly handled or shaken. The proper amount of hay to use is easily determined with a little practice. The lid should be tied on, never nailed, and no label is necessary, as the address can be written with indelible pencil on the white wood. The danger of having valuable, high-priced eggs broken or interfered with when sent in a box that is tied only, and not nailed, can be overcome by screwing down the lid.

In order to get best results, all eggs for hatching that have been been sent a journey should be unpacked and allowed to rest on their sides for twenty hours before they are placed under the hen.

Chicken Fattening.

On the Continent of Europe fattening has become quite a fine art, and in England now much more is being done than used to be the case. Fattening is a maturing by means of which the bird's flesh becomes more tender. There are two ways of fattening—one, by the forcing process in a fattening shed, only possible where chicken-rearing is carried on in a very large way; and the other, the ordinary way of giving certain selected foods without confinement. There are plenty of scientific fattening foods on the market, or, perhaps the best of all is, a mixture of oatmeal and milk, with a small quantity of maize, for it darkens the flesh, and makes it oily, and the oatmeal should be in the coarsely-ground state. Naturally, chickens will fatten more rapidly in a pen, where they are shut up and get no exercise, and therefore put on flesh more rapidly; but where only a few birds are being fattened, the poultry-keeper will do practically as well if he gives them a small amount of liberty in a limited run. But a very important point is to kill them off at the right time. If kept beyond this, when they are just in their prime, the birds will go back and can never be brought on again to their first state of perfection. And what, then, is the right limit beyond which the birds should not be kept? Three weeks or a month at the very outside. It is well also to bear in mind that a strong light should be avoided, for it does not tend to whiten the flesh as absence of light does. This, of course, is easily arranged in the fattening shed; but the run can be well shaded from the sun and kept more or less dark. These various points, once well understood, make chicken fattening a much easier and simpler and also more profitable industry than many suppose it to be. —F. W., Farm and Home.

Raising Layers.

Do not blame your pullets next winter when they are not laying; you should have been busy on the problem during the lost winter. You should know which hens are furnishing the eggs from which these pullets will be hatched; the chances on the average farm are that the eggs from the poorer layers and slower maturing pullets are being used for this purpose, and that the hens that have been laying all winter are being used to hatch these eggs. Culling, selection, elimination, kept constantly in mind, and continually practiced, will mean healthier fowls, livable chicks, earlier pullets, and eggs when they are most wanted. Cull out the extra males and the weaklings; select the quick maturing, early laying pullets and the hens that laid well during their first laying year, and make up a breeding pen for producing eggs for hatching. With them have a male or males whose dam was a vigorous, prolific hen Do not set eggs from the whole flock, but dispose of all males not used in this breeding pen, and from the remainder of the flock gradually eliminate the drones. It is surprising how large a proportion of the average flock is useless; or worse than useless; for these non-producers are in the way of the workers and are preventing them from doing their best. If you cannot make up such a breeding pen this spring, try this for next season. Next fall mark or band the first thrifty pullets to begin laying; also the yearling hens that are doing well this season. During the early winter carefully note their performance, and from these banded hens and pullets make up your next year's breeding pen. You will be surprised at the increased vigor and productiveness of your flock. If your hens are not responding to good treatment with a good average egg yield, try increasing that average by cutting out the nonproducers. A well-bred, well-housed, well-fed, and well-cared hen will lay 60 eggs during the three spring months, enough to pay her board for the entire year. There is money in hens; get it out. —W. E. Valpon, Colorado Agricultural College, Fort Collins.

PREPARE NOW TO MAKE EVERY MINUTE COUNT AT HARVEST TIME

FOR you must make every minute count then to be sure of getting the full profit from your acres. Smooth, rapid, uninterrupted work is a necessity when the grain is ripe for cutting. Every delay due to a slow, inefficient broken-down machine will rob you of a part of the reward you have a perfect right to expect.

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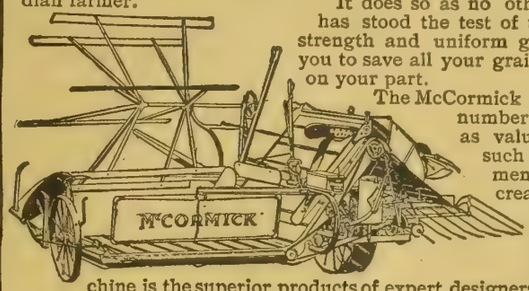

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The Unruly Member.

By Marion Harland.

(Continued from lastissue.)

On the threshold of the house, another warning awaited her. The door was opened by a kind neighbor, Constance's nurse for the day. "Walk in!" she said, in a louder tone than seemed advisable, considering the proximity of the sick-room. "Constance will be glad to see you." In a whisper, she contInded: "She saw you from the window, talking witn Dr. Merrill, and will ask you what he thinks of her. She is nervous and down-hearted to-day, so, if he did say anything unfavorable, don't hint it! Agitation would be fatal, in her present weak state."

The dying girl was propped up in an easy chair by the window, and beside her sat Ellen Miller. The placid face of the latter in a measure quieted Cora's excitement, or her nerves and courage would have been severely shaken by the wistful gaze riveted upon her, as she stooped to kiss Constance's hot forehead. "How are you to-day, dear?" she inquired.

"I cannot tell, Cora; I doubt whether I am as well as they would persuade me into believing. I fear, sometimes, that it will be a tedious season before I recover, if I ever do. This increasing weakness does not promise the return to health about which the Doctor and others talk to me. Do you suppose that they could deceive me, and I sick almost unto death, Cora?"

"What an absurd fancy!" said Cora, playfully. "Your sickness has produced a radical change, indeed, if it has taught you suspicion, and of those whom you love. Fie! I, for one, am disposed to resent the implication."

Constance laid her thin hand within that of her schoolmate. "Do not be disuleased," she said, with the plaintive simplicity of a child; "but this dread haunts me. Nothing but love and kindness moves them to tell me what they do; still, I cannot wondering if this fear of causing me pain is not tempting them to blind me, as long as they can, to the fact, the solemn truth that I may die of this illness."

"Dear Constance," said Ellen, "why brood upon this thought? Be sure that your earthly friends would not knowingly mislead you, and, should they err in their opinion of your situation, what is there so terrible in death? Remember in whose hands are the issues of life. If it pleases your heavenly Father to call you home, are you afraid or unwilling to go?"

Tears gathered in the eyes large and bright with the insidious disease. "Not afraid, Ellen. I learned, long ago, to trust and love Him, and I know He is able to keep all that is committed unto Him. I do try to say, unmurmuringly, 'Thy will be done!' but it is hard to resign the life He had made so full of sweetness, which He has given me capacity to enjoy; and I am so young—so young!"

She clasped her fingers passionately upon her brow, as if to still its throbbings.

"This will never do!" said the nurse's eye and finger to Cora, unseen by the sick girl.

Cora knelt down by Constance's chair, and drew her head to her shoulder. "My dearest friend, you cause yourself needless anxiety, and us exquisite pain. You will live to see how uncalled for all this borrowed trouble. We cannot let you go yet. You are alone in your imagination that you will be compelled to leave us soon. The spring will restore hope and health together."

"Did the Doctor authorize you to say so to me?" inquired Constance. "You speak pery positively. Have you his warrant for your prediction? You were talking of me, were you not? I watched you both, as I sat here, and told Ellen that I should entreat you to repeat every syllable he said."

It would have been a hard trial to one of less acute sensibilities and sterner principles than our poor Cora to see that face, so lovely in the eagerness of reviving hopes, and reflect upon the sentence that had gone forth against the "sweet" life to which she clung. It was no occasion for even slight marvel that she succumbed to the temptation.

"What an egotistical little creature you are!" she said with a laugh that sounded like genuine heart-music. "Dr. Merrill commented upon the weather and my blooming cheeks—for he is often gallant, after his fashion, cross as he is generally, —and merely observed, at parting, that you were low-spirited this afternoon, inclined to be hypochondriacal, and that I must cheer you up."

"But you must have asked him how I was," persisted Constance, not satisfied.

"I did, and I forget the precise 'syllables' of his reply. The substance of it was that you were 'no worse,' or 'well enough, if she would only think so,' or something else as amiably complimentary, so well as I remember."

"He did not intimate that I was dying, then?"

A cold hand, like that of death itself, struck upon Cora's soul, but superhuman power—from what source?—was granted her to answer steadily, cheerfully, desperately: "So far from that, he said that you were getting along slowly, but well, and alluded to your recovery as a matter of course."

When the sisters-in-law expectant left the invalid, she was comfortable in body, and manifested more liveliness of spirit than she had shown since an early stage of her sickness. Cora's conscience, seduced from its fidelity by her repeated perversions of good and evil, was basely recreant enough to congratulate her upon a worthy deed performed in the face of difficulties that would have daunted a lesscourageous spirit.

Early on the ensuing morning, a messenger came from Mrs. Remer to beg for Mrs. Manning's presence and sympathy in her sore bereavement. Constance had died at daybreak! When Cora could endure to listen, she heard how peaceful was her departure; how quietly and unconsciously the gentle spirit left the beautiful clay tenantless; learned of her affectionate and grateful mention of the beloved friend who had put to flight her presentiment that the dark browed king of terrors was, even then standing at her sid?. "Cora's visit has been an actual blessing to me, mamma. My dreams will be happy ones to-night, I know," she said, before committing herself to sleep. Her awakening was among the angels.

If these tender recollections of the lost one assuaged the bitterness of Cora's grief, her outward bearing was a false index to her inner emotions. For days and weeks she labored under an extremity of depression, as foreign to her nature as it was obstinate in its resistance to the efforts employed to relieve it.

"Constance's death was a fearful shock," said the Mannings and the majority of their acquaintances; but there were not wanting those who put another intepretation upon the gloom that shadowed a face but lately all beaming with health and pleasure.

"Cora is sadly altered," said the indefatigable Miss Healy, at an evening party. "She was invited here to-night, but sent a regret, so Miss Williams tells me. Some will have it that she is mourning over poor, dear Constance Remer's death, who was no more to her than to many of the rest of us. I guess there are other reasons why she should not feel particularly gay just now, and especially why she should not care to be here this evening."

Her ?mphasis and knowing shrug brought the wished-for request for enlightement on the part of her auditory.

"I do not know whether it is exactly fair to repeat the story in Mr. Miller's presence," simpered the mischief-maker, rolling her eyes affectedly at Horace, who stood near.

"That scruple can be easily overcome; I will retire out of hearing," he said, as indifferently as he could.

"No, please don't!" and the lady involuntarily (?) grasped his arm. "You wodld go off thinking me an ill-natured, ill-mannered tale-bearer. I have nothing disreputable to relate."

"I hope not, indeed!" Horace could not help saying.

She paid no notice to the interruption. "Nothing that you may not have heard fifty times over. I should not wonder if you were better posted up on this subject than any other person alive. It is altogether proper and likely that you should have had a version of the romance from head-quarters. Did Cora never confide to you the story of her youthful folly—herengagement to Fred Williams, nephew to our host?"

"I am now first made acquainted with the existence of that highly distinguished personage," said Horace, coolly contemptuous.

"Hush-sh-sh! There he is! He lives now in B——, but is spending a few days with his uncle. This is why I understood so quickly the source of Cora's low spirits, which disqualified her from joining our number. 'Auld lang syne' cannot be so soon forgotten. Do not be uneasy, Mr. Miller; yours is not an isolated case. You recollect the song: 'On revient tou-jours a ses premiers amours.' I dare say it is nothing more than the thought of her sufferings in the past, on his account, that indisposes Cora to meet her old flame. .It went very hard with her, when her father, at Mrs. Barrett's instigation, broke off the match. For years, there was a coolness, nearly amounting to a decided rupture between 'Aunt Janet' and her protegee."

"Was there a regular engagement?" asked some one.

"Fast and firm, my dear sir! She denied it, but not as positively as she does now, that there ever have been any pledges, mutual vows, etc., between herself and another individual whom I could name, but, dear me! everybody fibs about these things. You ought to have seen 'Aunt Janet's' look of solemn reproof when her niece's pretty mouth took oath by all the saints in the calendar, and by some who are not, for she protested upon her own word of honor, as a lady, that Mr. Nameless-just-now was no more engaged to her than she was to the man in the moon. I wanted to burst out laughing in both their faces."

Too much disgusted and annoyed to listen longer, Horace turned his back upon the scandel-monger, and began a conversation with his nearest neighbor; but Miss Healy had sufficient wit to see that her shaft, rough and coarse as it was, had found a joint in the harness. Her sly smile was truly feline, when she remarked his closer inspection of the junior Williams, and the curl of the lip which concluded it. She had her reasons for disliking young Miller, and would have gone to greater pains to torment him than the retailing of this one item of gossip cost her. It was unlike him to narrate the circumstance to his betrothed, confidently as Miss Healy had calculated upon this action. He was ashamed of it the instant the recital escaped him; angry with his thoughtlessness, when Cora's perturbation evinced that her annoyance or surprise surpassed his. She even trembled and grew pale with the unsuccessful attempt to reuly to .his story.

"You will call me a jealous fool!" said Horace. "Foolish I am to cause you uneasiness about the contemptible business, but it is not jealousy that irritates me, as I recall the tattler.s accusation. I wish she were a man. How I should delight to horsewhip the one who dared to couple your name with that of the coxcomb, the brainless puppy, who did nothing but pull his dust-colored moustache and drawl

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Lydia E. Pinkham's Vegetable Compound

Vienna, W. Va.—"I feel that I owe the last ten years of my life to Lydia E. Pinkham's Vegetable Compound. Eleven years ago I was a walking shadow. I had been under the doctor's carebutgotnorelief. My husband persuaded me to try Lydia E. Pinkham's Vegetable Compound and it worked like a charm. It relieved all my pains and misery. I advise all suffering women to take Lydia E. Pinkham's Vegetable Compound."—Mrs. Emma Wheaton, Vienna, W. Va.

Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotics or harmful drugs, and to-day holds the record for the largest number of actual cures of female diseases of any similar medicine in the country, and thousands of voluntary testimonials are on file in the Pinkham laboratory at Lynn, Mass., from women who have been cured from almost every form of female complaints, inflammation, ulceration, displacements, fibroid tumors, irregularities, periodic pains, backache, indigestion and nervous prostration. Every such suffering woman owes it to herself to give Lydia E. Pinkham's Vegetable Compound a trial.

If you would like special advice about your case write a confidential letter to Mrs. Pinkham, at Lynn, Mass. Her advice is free, and always helpful.

'Ah-h, indeed!' 'Ya-as!' 'Ne-ow, real-ly!' the whole evening! I forget! This is a serious matter—sport to me, it was once almost death to you. It is 'altogether proper' that I should enact father confessor, and possess myself of the 'romance,' from preface to 'Finis.' How old were you when you surrenhered your heart, without firing a shot,at the siege of this invincible Adonis? What a flint your father must have been to condemn you to inconsolable misery by his refusal to sanction so congenial a union! What filial piety you have exhibited in not hating him and Aunt Janet forever and a day!"

Instead of replying to his raillery, she burst into tears. The bewildered Horace wondered, apologized and coaxed by turns.

"Only tell me how I have offended!" he begged "You could not have conceived the idea that I was in earnest in aught that I have said. I never imagined that you would regard Miss Healy's fabrications more than I do—than every one does—as beneath the contempt of decent, sensible people."

Cora wept in silence, only signifying by a gesture that he was not in fault. Completely baffled, Horace had to await the subsiding of the flood. As her face cleared, his darkened. An unwelcome fancy had crossed his brain.

"Dearest," he said, tenderly, yet so gravely that she shook with alarm, "I do not seek to know the fount of the tears which have astonished as mucn as they have distressed me. Answer me a single question, and we will let the unlucky topic rest. Was there one iota of truth in all that Miss Healy reported? Was this man ever an intimate acquaintance—a suitor of yours?"

"Never!" murmured the frightened girl.

"Was there ever an attachment on either side?" pursued Horace.

"None tnat I knew of," was the response.

"I am content!" and he withdrew her hands from the tear-stained cheeks. "My little darling, you are weak and nervous, and are scared by shadows. Pardon me for teasing you so pertinaciously. Seriously, if you had fancied yourself in love fifty times in your girlhood, I should not care, provided you confessed it to me. The history of ten engagements and as many broken hearts on your part, even were all the honored swains Fred Williames, would not arodse the pang I should experience at one uartial or distorted coofidence. I am pleased, though, that you never cared for the fellow, else I might feel less flattered by your unaccountable acceptance of your humble servant."

"You were nev?r more welcome!" cried Ellen Miller, as Cora dropped in for an afternoon call. "I have an agreeable surprise in reserve for you. Come into the back parlor. There is something there you will be overjoyed to see."

Full of effpectant pleasure, Cora followed her. A lady arose at their entrance, but there ensued no such scene as Ellen had pictured to herself. The telltale blood dyed Cora's temples with shame and embarrassment, whilst the stranger remained quietly standing, without any token whatever of recognition.

"Is it possible that yod have forgotten Mary Chester?" said Ellen. "And, you, Mary, do you not recognize an old friend in Cora Manning! What fickle hearts or short memories you two must have!"

"Forgive me, Miss Manning," returned Miss Chester, extending her hand in graceful salutgtion. "I did not remember your name lor a moment, familiar as your features seemed to me. Have we met before, and where?"

"In B——. My aunt, Mrs. Barrett, is a resident of that place," Cora continued to say, she never knew how.

"I have the pleasure of a slight acquaintance with Mrs. Barrett,'j said Miss Chester, charitably intent upon removing the confusion of the other. "If I had known that she had a relative here, I should have done myself the honor of a farewell call, and inquired if she had any message or letters for you. Have you heard from her recently?"

"She has been with us for several weeks," was Cora's reluctant answer, for Ellen's eloquent countenance bespoke amazement of this singular proof of the "extreme intimacy" of Mrs. Barrett and her family whose "grounds adjoined" hers.

"You have visited her occasionally, I suppose?" resumed Miss Chester. "How careless in me not to recall the circumstances of our former introduction! I am not usually so forgetful. I must request your forbearance, promising never again to be guilty of a similar fault towards you."

Her scrutiny, earnest and puzzled, engaged that she would keep her word. The visit passed off stiffly, affable as she endeavored to be. She felt that there was a mistake, not her own, yet that continued inquiry would be unpleasant. Ellen was not less perplexed, and more troubled; while Cora's chagrin defied description. She took advantage of the earliest opportunity of ending the embarrassing scene, and walked hurriedly homewards, execrating her folly and the dnpropitious fate that had enabled the Chesters to keep an engagements so long postponed. There were more sickening misgivings mingled with her discomfiture.

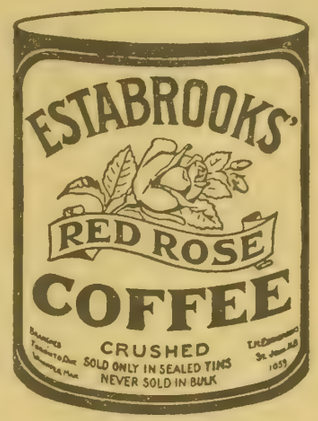
"What will Ellen think? She will tell Horace! What will he do? What can I say?"

The straight road of honest, penitent confesson was the last she meditated taking. The web of her own inconsiderate weaving was about her, choking, blinding, criupling her at every turn, and she planned escape by plunging deeper into its intricate windings. Culpable as was her confirmed habit of misrepresentation, lax as her morals had become through long indulgence in prevarication, she had seldom, if ever, manufactured and uttered a deliberate lie, such as she laid away in her neart, ready for her betrothed's hearing and belief againtt his next coming.

She met him with ...pidation, and one glimpse of his ...ures assured her that something weighed upon his spirits. There was a single flash of light—the fond beam that always greeted her—then the cloud again usurped the place of the "clear shining." It was an unspeakable relief to the guilty heart when the cause of his sadness was announced. The speculation of which we have treated upon a former page, as having excited his friends' fears, and in some degree, his apprehensions, had been unfortunate. He was likely to lose heavily by it—how heavily he could not as yet determine; it might eventuate in a total wreck of fortune. Like the strong-hearted man and Christian he was, he indulged in no useless murmurs at fate, or cowardly misgivings at what the future might have in reserve to tax his fortitude and strength. Already he was devising expedients by which he might retrieve his failure, if failure it should prove to be. Against all reverses he was prepared to struggle bravely, except the delay of the union wherein were centred his best anh proudest hopes. They might be obliged to live more plainly than he had anticipated, he stated to his ladylove, but, if the worst should befall him, he would still be able to

Crushed Coffee— what is it?

By a new process of crushing between steel rollers, instead of grinding, the skin, which remains in the eye of the bean after roasting, is separated from the kernel and removed by air suction, while the kernel is broken into small even grains. These grains when steeped, being free of the skin or chaff, settle quickly, leaving the liquid clear and bright, and give the true coffee flavor.



Estabrooks' Red Rose *crushed* Coffee is as easy to make as Red Rose Tea. Directions are in each tin.

It is strictly pure, not a particle of chicory or any other adulterant being used, and ispacked in air-tight tins the same day it is roasted so to retain its full flavor, fragrance and strength.

A good combination is Estabrooks' Coffee for breakfast and Red Rose Tea for other meals.

Estabrooks' RED ROSE Coffee

ORDER A TIN IN TIME FOR BREAKFAST

14

BLIGH & PRINCE
TRURO, NOVA SCOTIA

We now have a full stock of the following goods on hand ready for the spring trade:

Bissel Disc Harrows
Planet Jr. Implements
Perrin Sulky Plows
Empire Fertilizer Drills
Wilkinson Team Wagons
Champion Steel Road Machines
Great Western Manure Spreaders
Munroe & McIntosh Carriages of every Description.

We will be pleased to quote intending purchasers our best prices and terms, delivered at any railway station in Nova Scotia.

BLIGH & PRINCE

offer her a comfortable home, and together they would wait patiently for the dawn of more prosperous days. All that was noble in Cora's nature was drawn forth by this appeal. She hastened to disabuse Horace's mind of every apprehension of reluctance on her side to fulfil their contract, or repugnance to entering the humble dwelling he had described as her probable abode for years to come. Her regrets were all for him and his disappointmentf In her cheerful constancy, her self-forgetful love, he found compensation both for disappaintment and the suspense which was yet more harrowing.

Mr. Manning interrupted the dialogue. He, too, was full of sympathy, and was not quite superior to the temptation to repeat his prognostications of this very result. "I wanted to caution you, my boy," he said, shaking his head sagely, "but young people are apt to consider us old fogies as a set of bilious croakers, and regard our advice accordingly. Cora here can testify, as can my wife and sister, that I foresaw this evil from the start. And sharply was I taken to task for my opinion, I assure you" nodding at his daughter. "I won't repeat the womanly arguments that hailed about my ears until I was glad to hold my peace."

(Continued next issue.)

Rules For Making and Baking Cake.

Have the oven ready to receive the cake as soon as it is mixed. The oven can wait a few moments for the cake; the cake can never wait for the oven. The coarseness of cake is frequently due to its standing for a moment before going into the oven or the oven not being at the rignt temperature when the cake goes in.

Cakes without butter require a quick oven.

Cakes with butter require a moderate oven.

Cookies or small cakes require a moderately quick oven.

Cakes containing molasses require careful watching in a moderatee oven as they scorch easily.

If your cake browns as soon as you put it into the oven, the oven is too hot; cool it as quickly as possible by lifting the lid of the stove, or stand in the oven a quart pudding-pan filled with cold water.

Never move a cake in the oven until the centre is thoroughly "set." If you jar it, it will become heavy in the centre and near the bottom. This is due to the breaking of the cells.

To try a cake without a thermometer put your ear down near the pan; if the cake ticks loudly put it back, as it is not done. If the ticking is very faint or absent it is done. Take it from the oven, but do not handle it while hot.

It is always well to line cake-pans with greased paper, to prevent burning at the bottom.

Oatmeal Gruel for the Sick.

To make oatmeal gruel for the sick put half a cupful of oatmeal in a small cheesecloth bag and wash it out in a quart af tepid water. Rinse the bag back and forth in the water until all the flour is washed out and only the bran remains. Then add half a teaspoonful of salt to the oatmeal water and cook slowly for two hours, adding water so that there will be about a pint when it is done. If milk or cream is allowed the patient a tablespoonful of cream to a pint of gruel will make it more appetizing and nutritious. This will often stay on a weak stomach where nothing else can be retained, and where warm drinks nauseate it may be given cold.

Go Carry the Message To Gracia.

For a number of years you have seen over the top of this page, a little note from the editor, a part of which reads something like this—"Ladies this department is yours, use it to the best advantage." Now I should like to know how many ladies have tried to make this page interesting or instructive, by sending along a spicy little article, or exchanging a helpful idea. The time has come when we cannot live within ourselves; to broaden and develop we must have literary intercourse just as this season of the year, when all nature is awakening from her long rest, people begin to absorb new life, are imbued with new ambitions.

A few helpful suggestions just now, a new thought that means something and given at the proper time, may be the means of encouraging some man or woman; of reviving dormant energies, of bringing to life possibilities that even surprise themselves. True, some of our haggard faces look the surfaces of dead hopes, but let us thank God for the countenances that are smiling and the hearts that are brim full of hopeful aspirations. To them we turn for encouragement and help.

I am going to relate a true circumstance that took place last week in a little rural district. Six ladies met at the home of a bright little woman to help her quilt. They were all farmers wives, and of course the general topic soon developed into housecleaning and spring work. This clever little hostess possessing more organizing ability than is alloted most women, proposed that they organize into a general Improvement Club for the purpose of beautifying their premises—their home grounds in particular. This she had been encouraged to do from an article she had read in the Maritime Farmer, entitled "House Cleaning and Tree Planting." The idea met with general approval, and the afternoon was spent in discussing how they could best manage their grounds, plant trees, shrubs and vines. Now this is just the time for this kind of work, and in nine cases out of ten unless the women take an interest in these things they go undone. At this season of the year, the farmer is too busy getting ready for the seeding to spend much time about the house and yard.

But we can, and why not do it—and do it now. Mothers, interest your boys in the planting of trees, shrubs and vines. Then the farm house that stands in the middle of the field so bare and naked, will take on the appearance of cosiness, and the stranger passing will be impressed that peace, plenty, and happiness reign therein.

Will feel also that a warm welcome and a good meal awaits them at any time. If these six ladies carry out their idea as they pledged there will be lots who read the Farmer that can point their finger to the very districts, the improvement will be so marked.

"Come, let us get nearer to nature and thus nearer to God."

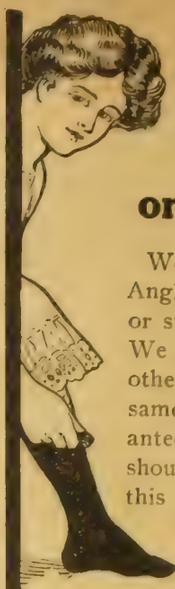
AUNT BETTY.

A Woman's Ideal Husband.

First of all I desire him to be a thorough gentleman—by this I do not mean he must be highly educated, neither is it necessary that he be of high birth and a man of wealth but a gentleman in the truest sense of the word—first of all a manly man loyal to himself and to every man, woman and child that he comes in contact with and always kind, courteous anh thoughtful of both mankind and all living creation.

As a citizen he should be public spirited, interested in the welfare of his own community, also that of the town, State and Nation. To this end he should be in touch with vital affairs to such an extent that he can vote intelligently, and be broad-minded enough to cast his influence on the side which he considers to be right, regardless of party lines or creeds or pocketbook pressure.

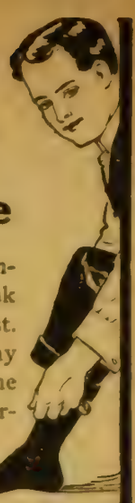
As a husband, loyalty should be his gdiding star, not that he must forego all pleasure unless shared by his wife, not that he must give up



Guaranteed to Wear Longer

or you get 2 pairs free

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to wear longer than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs free of charge.



Let us again remind you that we guarantee the following lines of Pen-Angle Hosiery to outwear others. That means the best wearing hosiery sold anywhere.

The reason why they will wear longer is because of the exceptional quality of the cashmere and cotton yarns we use. And because we knit them on Penmans' exclusive machines. We have the sole rights to use these machines in Canada.

They're Seamless

These machines form-knit the hosiery to fit the form of the leg, ankle and foot perfectly, without a single seam anywhere to irritate your feet or rip apart.

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

You see, these machines increase the wear resistance of Pen-Angle Hosiery and at the same time make them more comfortable—your ideal hosiery.

Make up your mind right now that you will never again buy hosiery with horrid seams up the leg and across the foot—hosiery less serviceable—but get Pen-Angle 2 for 1 guaranteed hosiery.

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns, 2-ply leg, 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150.—Very fine Cashmere hose. Medium weight, 2-ply leg, 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn with 3-ply heels and toes. Black, light and dark tan, champagne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, $1.00; 6 pairs, $1.50.

No. 1175—Mercerized. Same colors as 1720. Box of 3 pairs, $1.00; 6 pairs, $2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

No. 330. — "Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, $1.00; 6 pairs, $2.00.

Instructions

If your dealer cannot supply you, state number, size and color of hosiery desired, and enclose price, and we will fill your order postpaid. If not sure of size of hosiery, send size of shoe worn. Remember, we will fill no order for less than one box and only one size in a box.

Catalog Free

If you want something different than the styles and shades listed send for handsome free catalog which shows an extensive line in colors. 44

Pen-Angle Hosiery

WARRANTED HIGH PENMANS GRADE HOSIERY

Penmans, Limited, Dept. 45 Paris, Canada

all thought of others but that in thought, word and deed his life may show his affection and constancy. This may and should be done in a quiet fashion. It is only in the inner home circle that endearments and a full expression of love should be manifested but it is important that in the right place and at the proper time affection should be given full expression, if stifled and shut out it will die down and possibly, nay probably, disappear even as a plant will die without light and air.

As a father he should possess patience and tact no less than is expected of a mother. He will need a retentive memory, an imaginative mind and a firm but gentle spirit. He will need these qualities that he may temper his judgments by thoughts of his own youth, that he may discern, to some extent, the fancies of his children and that he may command obedience by love and justice rather than by brute force. Furthermore he should have a young heart, a hearty laugh and a deep love for children.

In short, my ideal husband is clean morally and physically—a busy, hearty and happy man, a person to be loved and thoroughly trusted by all who know him. Upright, honest, fearless and cheerful he meets life courageously and quietly in whatever phase it presents itself and is a rock of strength to his wife and little ones.

This ideal husband is placed on a high standard, as most ideals are and should be, and yet I have known at least two men in my life who will fully measure up to the requirements of this article.—O. B. Cheerful, in Maine Farmer.

Teachers Need Mothers Aid.

The National Anti-Truancy Association, at its last annual meeting, had this bit of advice to give mothers as to children who deliberately play "hooky" from school.

"It is not the teacher alone who can make school so attractive that the child will not become a truant. Nor can the law regulate every case of truancy. There must be aid from the home, and more of this must come from the mother than the father, since the mother usually has the closest contact with the child. For a mother to show interest in a teacher's work by knowing her personally and regularly visiting the school, is one bar to truancy. Bringing the teacher into the social life of the pupils home, is another bar. A third and most important bar would seem to be set up through the mothers taking a daily interest with the child in its own school work. No child, observing these three different attitudes of the mother, can ever become a truant."

Rhubarb Vinegar.

For ten gallons, take twenty-five ordinary sized stalks of rhubarb, pound or crush with a piece of wood in the bottom of a strong tub, add ten gallons water; let stand twenty-four hours; strain off the crushed rhubarb and add eighteen pounds of sugar free from molasses, and a teacup best brewer's yeast; raise the temperature to 60 or 80 deg., and put the compoubd into a twelve gallon cask; place it in a position where the temperature will not fall below 60 deg. In a month strain it off from the grounds, returning it to the cask again, and let it stand till it becomes vinegar. A. A.

Two Little Old Ladies.

Two little old ladies, one grave and one gay,
In the self-same cottage lived day by day.
One could not be happy, "Because," she said,
"So many children were hungry for bread."
And she really had not the heart to smile,
While the world was so wicked all the while.

The other old lady smiled all day long,
As she knitted, or sewed, or crooned a song.
"She had no time to be sad," she said,
"When hungry children were crying for bread."
So she baked, and knitted, and gave away,
And declared the world grew better each day.

Two little old ladies, one grave and one gay—
Now, which do you think chose the better way?

Children and Wild Flowers.

Nothing pleases the children better, and certainly nothing is more delightful for the mother, than a day spent in the woods and meadows with the wild-flowers. These "family picnics," as we call them, are a regular feature in our neighborhood. Two or three families, the mothers and children, at least, make up the party, baskets are filled with lunch, and we are off for the woods before the sun is fairly up. Such a time as we have!—picking strawberries, gathering flowers by the armload, and all the while trying to keep pace with the children, who become veritable wild things as soon as they get out in the open. It is invigorating refreshing, this thing of getting out in the woods and being bathed from head to foot in the sweetness and fragrance of spring.

FOR YOUR

Stomach's Sake

You should keep Mother Seigel's Syrup by you. It soothes and strengthens, cures wind, pain, cramps, colic and all forms of indigestion.

Take Mother Seigel's Syrup

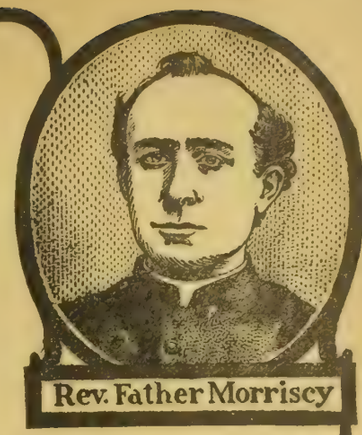
Sold Everywhere

A. J. White & Co., Ltd., Montreal

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

A Positive Cure For Rheumatism



Rev. Father Morriscy

For many years, both during Father Morriscy's lifetime and since he passed away, his No. 7 Tablets have been curing many of the worst cases of rheumatism in Eastern Canada.

During his lifetime it became the custom, when people could not get relief from other sources, to consult Father Morriscy, and few indeed did so in vain. His standard prescription came to be called

Father Morriscy's No. 7 Tablets

and it can now be procured from any druggist or dealer in medicine.

No. 7 Tablets act directly on the kidneys, stimulating them so that they can remove from the blood all the Uric Acid, which alone causes the rheumatism. Two or three weeks' treatment cures ordinary cases, while with the worst chronic cases it seldom takes more than three or four boxes of No. 7 Tablets to thoroughly eradicate the rheumatism from the system.

In every case, right from the start, the sufferer gets relief from the torturing pains and aches.

We would be glad to refer you to one-time rheumatics, now well through taking Father Morriscy's No. 7 Tablets.

50c. a box—at your dealer's. 108

Father Morriscy Medicine Co., Ltd., - Chatham, N.B.

Erysipelas Cure.

A Canadian relates how his father was afflicted with erysipelas from the time he was a young man until past fifty years of age. An honest physician, and there are thousands of his kind in the world, after two days search of all the authorities he had in his possession, told the old gentleman to go home and purchase some flour of sulphur and some molasses, to mix the two to saturation, and to take the compound three times a day until cured, which might take three or more months. The patient was completely cured, and lived to the ripe old age of ninety years, ever after being one of the healthiest of men, the Canadian declares.

The Visitor's Bedroom.

Unless a chest of drawers and some hanging hooks are provided for the use of a staying guest, she is bound to keep the bulk of her clothes in her box, with a miscellaneous assortment of articles lying about the dressing-table. It is impossible to keep everything one needs out of sight in a box; they get tumbled about in hopeless confusion every time a search is made for something. Under these circumstances the bedroom quickly assumes a very untidy appearance. I have had a dress-skirt hanging on one bedpost and a soiled linen bag on the other, another dress skirt suspended from the back of an armchair, and two blouses laid across it; writing materials on another chair, my needlework on an ottoman, and the dressing-table completely covered with necessary articles of the toilet, etc.

Having made suitable apology to the hostess for the apparently disorderly look of the room (really not disorderly, but the reverse, only that nothing was hid behind doors or under lids), one can scramble along comfortably enough for a week or two; but difficulties arise for the guest when a servant or the mistress of the house persists in tidying up. I know one hostess who cannot permit her guests the privacy of their room or the control of their possessions. Lay your veil on the dressing-table, and when next you think to pick it up it is gone. Fold some article of clothing neatly upon a chair, ready for use in an hour or two, and when next you enter the room it has been spirited away, and you must search out the lady and ask her where she has put it. This is carrying tidiness to quite illegitimate lengths. Another very tidy housewife says in this connection, "However particular I may be myself, I never interfere with a visitor's bedroom. If things are straightened up, none of her belongings are put out of sight."

"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations, as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods, etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs, and its operation is certain and beneficial. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 35c., sufficient for ten days' treatment, to every suffering woman who will write for it. Enclose 2 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

CHINESE STARCH

This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

For Sale to the Trade by
MESSRS BAIRD & PETERS, St. John, N. B.

OCEAN MILLS, Mount Royal and Lasalle, - Montreal. Que.

Like Attracts Like.

Did you ever think that the thing you are looking for is looking for you; that it is the very law of affinities to get together?

If you are coarse in your tastes, vicious in your tendencies, you do not have to worv very hard to get with coarse, vicious people; they are seeking you by the very law of attraction.

Everywhere affinities are seeking one another. When boys and girls go to the city for the first time to seek positions, how quickly they find their affinities.

Those who are naturally wild, and those who wish to dissipate, do not nave to look very far or very long to find those with the same coarse, animal tastes.

Watch country youtns who go to the city to seek their fortunes.

Some seek the Young Men's Christian Associations, some the churches; some the saloons and the dance halls. Those with mdsical tastes very quickly get into a musical atmosphere. Those with artistic natures gravitate naturally to other artistic temperaments.

Our thoughts, and motipes, our desires, our longings, are forces which find their fellows.

How Shall we Keep the Boy's Heart in the Home.

Every mother confronts vital problems which she must solve single-handed. She may be well read, well informed as to food values, physical culture, home remedies, and her education may even extend well into various practical lines. Nevertheless she will meet circumstances and conditions, the judicious treatment of which may mean so much, not only to her, but to her family, and to deal with these she has only her own experience, ingenuity, tact, motherly love and common sense. Many a mother, though she may not speak of it, finds these difficulties tracing lines of worry in her face and aging her by years.

Let us look straight into one such problem. "How shall we keep the interest of our boys in the home?" Every mother wants her boy to meet people and learn his place in the world. To do this it is absolutely essential that he see what other homes, other individuals are doing, and one very good way to personally enjoy this branch of a son's education is to invite his friends to the home.

Parents frequently set themselves upon a pedestal of authority, when the hand and advise them and devise with them, which will in no they should take their children by way depreciate parental love, but, on the contrary, will inevitably strengthen it and foster individual effort and a love of co-operation between parents and children. Children should be encouraged in reasonable "hobbies," particularly those of a practical nature. A financial interest in the farm often spurs a young man as nothing else will.

No boy has a right to be turned loose upon the public without a knowledge of the ten commandments for his moral guidance. The principles of justice must be instilled into every sturdy fibre!

The boy has to know himself. He has a body, a mind and a soul, each of which needs food for growth. Without a knowledge of the body, which not infrequently is so badly neglected, he is no safer than if placed in a running railway locomotive. If the line is straight, he may meet no serious accident, but most lines have sharp curves, stops, and not infrequently, obstacles in the way. Prepare him for these. Teach him botany. Teach him physio:ogy. Give him to understand tnat his body is a very fine machine, loaned him for a time that he may by living, bring character and usefulness into his own life and into the lives of others.

Give him facts as he is ready for them. Teach him that obedience to nature's laws means health; that their violations means disease. Even the boys in a well regulated home should have a fair grasp of food values and their relation to health. This is one of the questions at the base of all morality. There is more sin and sorrow directly resulting from incorrect diet than from all other causes combined. Bad food and drunkeness cause disease. Disease weakens the mind and dulls the morals, and henceforth a train of evil follows, till the radical causes are corrected.

Place good books in the hands of your boy. If he doesn't take to "Pilgrim's Progress," perhaps he may derive as much good from David Copperfield, or vice versa. But next to his Bible let him have such books as "What a Young Man Should Know." One-half the crime illness, sorrow and sin of this world would never be known were it not lor ignorance concerning those things which is our rightful inheritance to know. Give your boy the knowledge which will enable him to shun evil.

The organ, piano and violin are most excellent companions. The latter instrument is not limited to dance music. It is the queen of musical instruments, just as the pipe-organ is king. The violin lends to sacred music a delicacy and sweetness all its own. Music satisfies the hunger of the emotional nature and through it we may come in touch with the noblest thoughts translated in tone.

It must be borne in mind that boys are so much unlike that entirely different methods must be used in their education. To determine the best method for a certain case, one must know thoroughly his traits of character and base thereon one's line of action.

Some boys yield to constant gentle persuasion, others resuond to stern dicipline; many give their best when put in charge of and held responsible for others, for instance, their younger brothers and sisters, or their comrades in school. How often a boy turns right about face, when made president of a Band of Mercy, a literary club or similar organization. A love for British fair play takes hold of him and calls him to higher responsibility.

Then there is the young man who must have the facts of life before him. He is not satisfied with what other people tell him. He resolves to see what others know as good and what others know as evil. The owner of such a disposition places himself in constant danger. So many young men needlessly mar their lives in gaining a knowledge of the facts of life. He who returns "unspotted from the world" will, like Padl, be so convinced of the power af good and the hideousness of sin that he will be a stronghold for good.

He cannot—with very, very few exceptions—do so, however, without a thorough grounding in the principles of a Christian home. He must have a mother who loves and trusts and expects great things of him and frequently tells him so. He must have a mother who constantly prays for him. Prayer is a service of love, deeper, stronger, farther reaching than any of us know.

In Case of Accidents.

It may be that you will never be called upon to administer in cases of serious accidents or poisoning through carelessness, as mistakes in taking medicine. But it is important that every one be familiar with proper steps to pursue and antidotes for the most common poisons. In the country oftentimes a physician cannot be reached for hours but with a little medical knowledge you will sometimes be able to save a life. First and foremost, don't lose your head and frighten the patient but do quickly wnat needs to be done.

When an artery has been cut tie a cord between the wound and the heart retarding bleeding as much and as quickly as possible. The knot of the cord should come directly over the artery. Another way to stop bleeding is to press both edges of the cut together firmly or thrust the hand into the wound. Always remember that the very first thing to do is to stop the bleeding.

It is a splendid thing to have various sizes of bandages on hand which can be obtained at any moment. Worn out pillow slips or old pieces of sheeting are best for the purpose. They should be torn into long strips, rolled neatly, and put into a handy place. Where there are children they will be called into use very often.

In cases of fainting lay the person on his back with his head as low as the body. Dash cold water on the face to stimulate the spinal nerves which will hasten the action of the heart. The heart action will become stronger shortly and consciousness regained. If the room is hot and close carry the person into the open air.

Every one should know how to proceed to save a drowning person. Lay the person on his back with his head lowest. Stand at the head and draw each arm outward and uuward in a semicircle away from the body until they are stretched above the head almost in a line with the

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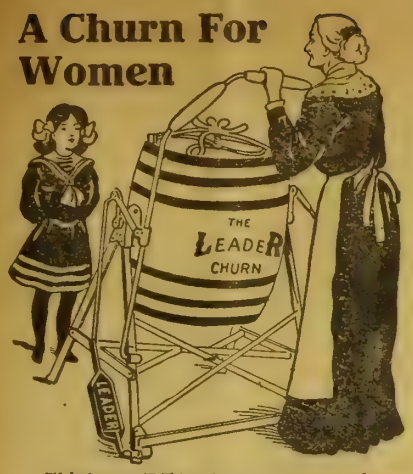

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body. Then carry the arms directly forward and down and press them against the side of the chest. These movements should be repeated about 15 to 20 times a minute or at the rate of natural breathing. Sometimes by pressing and kneading hard upon the chest a great deal of air will pass out of the chest. Never hesitate attempting anything to bring about artificial respiration for sometimes ignorant attempts result in saping a life.

Hardly any accident is more common than poisoning either by intention or by mistake. Often there are symptons of poisoning when the patient cannot or will not say what he has taken, thus it is important that we know some general directions for treatment.

1. Make the person vomit at once. To do this tickle the throat with the finger, pass a feather through the nose when the mouth cannot be opened or give him a teaspoonful of mustard mixed with a cupful of hot water.

2. If the poisoning is not discovered for several hours give castor oil or salt to remove any poison which may have entered the intestine.

3. Give the antidote for the poison which will destroy the poison left in the body.

4. Then give a weak stimulant, for the person is very weak and tired.

5. Rest and quiet, a low diet, and the reclining position should be kept for severa, days.

Strong coffee is the best general stimulant and should contain neither sugar nor cream.

If a large amount of pure carbolic acid is swallowed it produces violent and rapid death. A stomach pump will generally have to be used to remove the poison.

The Farmer's Wife.

There are people in the world who look upon the work of the farmer's wife as drudgery. It is not such. Neither is the farmer's wife a drudge nor a slave. Our work is not hard only as we make it so; look back and see what our mother's work was. I remember very distinctly how my mother made butter and cheese, how she used to spin and weave beside doing all of the knnitting and nearly all of the sewing for the family. The families then were by no means small. Did she consider her work drudgery? No, she was working for her husband and children and no woman unless she is working for self alone can call it such. Love lightens labor. We have no spinning or weaving to do; few are the women who make butter or cheese; and many are the women who do not know how to knit.

We have large kitchens with every convenience, hard wood floors that are easy to keep clean, and machines with which we can do our washings in two hours' time. No, our work is light, compared with what our mothers' was.

The farmer's wife had much rather do her work herself than hire it done, and she much rather have the care of her little ones than trust them in the hands of a servant.

How much a woman on the farm has to enjoy that a city woman does not have! She has fresh eggs to cook, good new milk to use, plenty of apples and potatoes, a good garden, and berries of all kinds which she enjoys picking herself.

The farmer's wife is interested not only in her home, but in the church, the school anh the Institute as well.

With all these pleasures and with the free delivery which brings her so many papers and letters from friends, she ought to be and, I believe is, one of the happiest women in the world.—Maine Farmer.

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Before leaving Canada, we want to thank you for the "New Scale Williams" Piano you furnished for the Dresden Orchestra, both in Hamilton and Toronto. *This is certainly a wonderful piano*, and if we can always have as good an instrument we will be perfectly satisfied. *The tone is rich and mellow, and the sustaining powers are equal to anything we have ever heard.* Again thanking you, and congratulating you on your success in producing such a beautiful tone, we are, sincerely yours, WILEY OLSEN,
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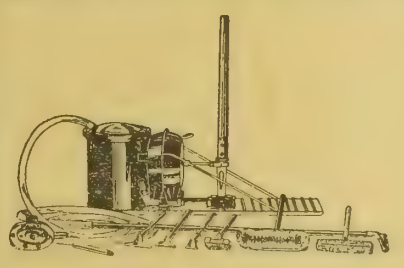

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Bonusing the Dairy Cow.

During the absence of our editor who was called away owing to serious illness in his family several typographical errors crept into the following article in last issue, which made it sound rather erratic. We are therefore republishing it in the corrected form.

Editor Maritime Farmer:—

I was pleased to see a correspondent's further comment on the bonus question for dairy cattle.

I refer to the letter from my friend Mr. Peters, in your last issue.

I am going to ask you for space in this issue, for fear any of your readers should notice the amount of money which my friend Mr. Peters, seems to be under the impression I stated would be required as its first item, namely, three hundred thousand dollars.

This amount would perhaps be a paralizer. What I did say was that it would require, under the estimate I made up, from $30,000 to $40,000 to try it for one year.

This estimate was made up as follows: In order to give each county a chance simultaneously, would require fifteen Inspectors, one for each county.

These I estimated at $1000 each	$15000.00
I further estimated that these fifteen could inspect or check up in the neighborhood of 500 cows for two milkings once each month (this would vary according to the distances apart the herds entering would be). This would make 7500 cattle available to compete for Bonus and in order to be prepared that all would succeed in making 4000 lbs. milk and 160 lbs Butter Fat and the Bonus says $3.00 per cow would leave the Dept. open to have to furnish	$22500.00
Or a total of	$37500.00
To which might be added some incidental expenses say	2500.00
Or a grand total of	$40000.00

It is not, however, to be expected that all, those entering will be successful and make the required amount, but of course the Department would have to be prepared Then your readers will understand the amount required to qualify is to be raised each year 1000 lbs., that is, if the scheme proved workable and productive of good results it would be carried on for five years, making 5000 lbs. the minimum the 2nd year, 6000 the 3rd year, 7000 the 4th year, and 8000 the 5th year.

My own opinion is, the amount to be paid bonus each year would rapidly grow less as the amount required to qualify increased, so that the Bonus money would not necessarily grow excessively burdensome and yet the result required would be attained, namely ascertaining the productive value of your cow machine.

Now it is quite true that this weighing should be done without this incentive' but the fact remains that it is not done in one case in ten, and yet the Department and Institute speakers have been preaching it for years and years, and instead they are leaving the dairy and going at the wheat and I am strongly of the opinion that nothing short of the Bonus dollar will wake the majority up to the fact that they must know what the machine is doing if they are to continue putting the costly feed of today into that machine.

I am quite willing to admit that it is some trouble and expense to

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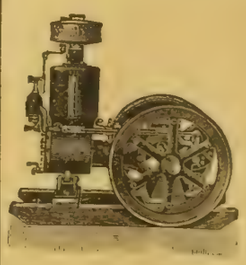

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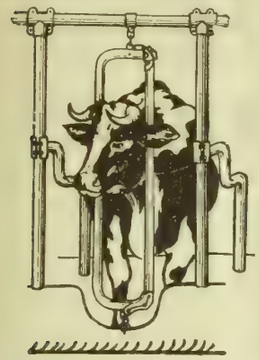

They will make it brighter and neater, are stronger, more durable and cost less than any other kind of stable when all is considered. With them your cows will be kept clean and comfortable.

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SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Construction of Wharf at Shediac, N. B," will be received at this office until 5 00 P. M., on Thursday, May 26, 1910, for the construction of a wharf at Shediac, Westmorland County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department, at the office of E. T. P. Shewen, Esq., District Engineer, St John, N. B. Goffrey Stead, Esq., District Engineer, Chatham N. B., and on application to the Postmaster at Shediac, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, with their occupations and places of residences. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, made payable to the order of the Honourable the Minister of Public Works, for the sum of two thousand one hundred dollars ($2,100.00.) The cheque will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
NAPOLEON TESSIER,
Department of Public Works,
Ottawa, April 26, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

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Dominion Exhibition, St. John, N. B September 5th to 10th, 1910.

Charlottetown Exhibition, September 20th to 24th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

If you have pure bred stock of any kind for sale, it will pay you to advertise in these columns.

weigh, especially at 5 a. m. of a winter's morning, with a half blackened lantern globe as the only light and one's own eyes about half opened and perhaps in the spring of the year you have been up half the night looking after a new calf—or staying by the ewe with her new lamb, etc., and yet to accomplish the desired result today you must introduce and keep up some business methods in order to keep in the competition at all, as one cannot farm today and meet competition under the same system as our forefathers or our old veteran friend, Donald Innis, did.

Because where Donald, 30 years ago could get along with a scythe @ 60c, we must have a mower @ $60.00, and where he had a hand rake at 25c, we must have a horse rake at $25.00, and so on, or if we don't its the Sheriff that would be knocking at the door instead of Donald's Woodpecker.

I myself started out to make a living from the dairy cow, some 27 or 28 years ago, but like a good many more I got discouraged, because having a very limited capital, I did not seem to get ahead and finally drifted away from it and found it easier to make a profit in other lines. I thought at that time the trouble was with the country itself. After seeing other countries I found out there was nothing much wrong with this country and after some more years of investigation, I am satisfied the dairyman's greatest trouble is in the lack of knowledge of his production, and the fact that he is only producing with two machines about as much as he should produce with one. This can only be verified by careful weighing and testing year after year—breeding only those which are producing paying quantities and weeding out those which are not.

Think what this expenditure of $40,000 would do. It would produce a definite knowledge of what 7,500 animals, at least, were doing.

It would encourage, at least, 700 or 800 dairymen each year to a larger and heavier production, with practically no more cost. If the money were spent, it would all be spent within the country and return to every business interest in the country. It would enable the wholesale distributor of the product to reach out and get a foreign connection to export to, inasmuch as he would feel safe that the production was going to keep up at least for five years and right here is one of the dairyman's hardest set backs, for after all this is only a very narrow and limited market here in New Brunswick, because our buyers after all can only handle a very limited volumn of trade and while it is true that they have to go outside to-day for some dairy and hog products and consequently pay a high price, yet when we all get to producing on those lines, it does not take long for our limited market to get overstocked and the price to tumble down, along with which tumble comes the discouragement to the producer.

One cannot, perhaps, blame the wholesaler, for in the past, if he should attempt to start for an export connection, the very next season he is confronted with a shortage and he is unable to make sales.

If, on the other hand, he was assured of a continuous increase, so he could make his foreign connection, or export trade, he ought then, in his own interests, to keep up a fair market price, knowing that he would be able to sell and increase.

It is in this direction that we are different from our neighbors in the Upper Provinces, inasmuch as they have a much larger, more expansive market and buyers than we in this smaller market.

I, myself, have seen pork, for instance, which is part and parcel of the dairying, in the St. John market start, say, at 9c in the fall and before the river navigation close go down to 5c, simply because the buyers quickly got all they could handle, or apparently so.

So far as the need of this bonus or

Gombault's Caustic Balsam

The Worlds Greatest and Surest Veterinary Remedy

HAS IMITATORS BUT No COMPETITORS !

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure In Results.

None genuine without the signature of The Lawrence-Williams Co.

Manufacturers & Proprietors for the U.S. & CANADAS. CLEVELAND, O.

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

TORONTO, ONT. CLEVELAND, OHIO.

This Serviceable "Swiss" Army Rifle For $3.50

We have in stock about twenty of these "Swiss" Army Rifles which we would like to dispose of. Having purchased a large number of these rifles for premium purposes we necessarily got them at a bargain and are now offering them to you at wholesale prices. The shooting season is over and we do not want to carry so many in stock. They retail at all hardware stores for about $6.00 each. Ammunition for these rifles is cheap and can be obtained at almost any hardware store in the provinces. If your dealer does not keep it we can get it for you- Every farmer should have a rifle and this is your opportunity. Better send for one to-day. They will not last long at the price quoted, $3.50. Orders filled in rotation. If all are sold when your order is received money will be refunded. Order to-day. Cash must accompany order. If you send check add 25c for exchange.

The Maritime Farmer

SUSSEX, - N. B.

encouragement is concerned, I think all will agree, especially when you stop to see the way our ranks are being depleted and the farms abandoned of stock raising and the rush to the wheat fields. In many parts of this, the Banner County of Kings, so called, it is going on to an alarming extent, and mind you the Dominion Government is practically bonusing them to go by giving them 160 acres of workable land, that with willing hands and a pair of horses, will produce a profitable crop in one year's time.

Do your readers and our representatives in the Government know and realize that our dairy production, throrgh the creameries, has decreased over 200,000 lbs. of butter from what it was two years ago ?

Think of what that means !

Some of it may perhaps be accounted for by being made at home on the farm, but still it ought to be increasing both on the farm and in the creamery.

Twenty years ago Denmark was exporting $7,000,000 worth of butter, while last year she exported $45,000,000.

Incidentally I might mention that the same increase is visible in all her farm products, brought about principally from the fact that she maintains almost a thorough agricultural policy, and there are at the present time some 24 members of its government, who are practical farmers, who know what they want and who assist the agriculturist in every possible way.

The possibilities of this dairy industry in the province of New Brunswick are enormous, if it is once put on a profit producing basis. We can raise crops here equal to any part of Canada, unless it may be one or two grain crops. What we need is to get our own people on their feet.

The time is coming when the West will look to the East for dairy cattle, in fact I have the proof of this on my table before me now in an enquiry for a carload of Ayrshires for Wyoming (this comes in response to my ad. in your excellent paper, and reaches me only about one week after the paper was issued.) They go on to state that they shall have to look East for dairy stock. This will, no doubt, be much truer as time goes on, for with so many cutting out the live stock and going into the wheat raising, it will not be long before their soil will become depleted and the wheat market eventually overstocked, because in cutting off the live stock, they are cutting down one of their heaviest customers for grain and grain products and will surely eventually drive their own market price down. Already I read of a large percentage of last year's grain being held by the farmers themselves. Let us then get some stimulation from this bonus. Get our herds in better shape and be ready for stocking up our old neighbors when they come East for some good milkers, by that time we will have records to show them of just what profit producers we have.

I already have many converts to this idea and will be glad to hear, through your columns, of many more and if we stand shoulder to shoulder, it will surely come, for after all, our representatives are only elected to carry out our wishes, and it is surely the farmer's turn for something now. He has been patted on the back long enough—told he is the backbone of the country—made to pay his share of the taxes, which in the end, pays the subsidy for new railways. Pays the subsidy for new steamship lines. Guarantees the interest on cold storage warehouses for the capitalist. Pays the bonus on the steel making. Pays the bonus on the iron production. Pays the bounty to the fisherman and other items too numerous to mention.

Now let us have a turn and have a bonus on the dairy cow production.

I am no politican and do not know the ways and means required to raise the amount, but I say if it can be done for every other industry, the way can be found to do it for this, when in the words of Chancellor Jones, of the U. N. B., say :

Fish in N. B. is worth.....$6,000,000
Lumber in N. B. is worth..... 7,000,000
Agriculture is worth..... .. 20,000,000

Add to this the fact that our specially appointed commission honestly report a decline in almost every branch of the business, in every section they visited and I think you have all the food necessary to demand a radical change of some sort.

In order that all your readers may have an intelligent idea of the proposed bonus, I submit details as follows :

That a sum not exceeding $15,000 be granted for the remuneration of fifteen inspectors, one for each county, whose duty it shall be to visit each herd that may enter for the bonus, once each month during the year, there to inspect the weighing of each cow's milk that is entered in the test, both night and morning. Also to test the milk for butter fat. That said inspector shall be a capable, practical man, expert enough to give instruction and advice regarding breeding, feeds and feeding, when called upon to do so.

He shall also be required to take an accurate census while passing through the county of the live stock, crops and any other stasistics that may be required. That a further sum, not exceeding $25,000, be granted for the purpose of paying a bonus of $3.00 per cow to all cows qualifying for the following production each year :

1st year all making not less than 4,000 lbs. milk or 160 lbs. butter fat.
2nd year all making not less than 5,000 lbs. milk or 200 lbs. butter fat.
3rd year all making not less than 6,000 lbs. milk or 240 lbs. butter fat.
4th year all making not less than 7,000 lbs. milk or 280 lbs. butter fat.
5th year all making not less than 8,000 lbs. milk or 320 lbs. butter fat.

That this plan be put into effect for one year first, as a trial and if found productive of good results, that it be continued for four years longer, or five years in all.

This, in brief, is the scheme as outlined. The amount required is a mere bagatelle if it will put the industry on its feet for there are over 60,000 people directly and indirectly interested in this line in the province of N. B , and I believe I am within the mark in stating that at least 75 per cent. are discouraged to-day and I further believe it is because they do not realize that they are feeding two cows to get the same result they should get from one.

At the end of five years those entering for bonus would know just where they stood, would know just what their machines were earning and whether they could afford to keep them or not. The machines that were producing would have some value.

At present the average cow changes hands at about $30 to $35, the buyer has nothing to go by except his judgment, and that is often like telling a horse's age after the marks have gone off his teeth.

He will invariably be told "she will fill a pail," but he forgets the long time she goes without filling a pail.

Prof. Cummings says: "The average production in the Maritime Provinces is 3,000 lbs." That would make, on an average, 120 lbs. butter fat, worth an average of $30 for a year, while she will cost, in feed alone, that much money.

TRADE B MARK

Amatite ROOFING

A Frank Statement

HOW many manufacturers of ready roofing will tell you frankly how their goods are made ?

Mighty few.

They will talk about "secret formulas," "special waterproofing compounds," etc.—ALL NONSENSE.

They don't tell you what the goods are made of because they don't dare.

From the start we have never hesitated to tell the buying public just what Amatite is made of and just what it will do.

How Amatite is Made

Amitite is made of two layers of COAL TAR PITCH—THE GREATEST WATER PROOFING MATERIAL KNOWN,

Alternating with these two layers of pitch are two layers of coal-tar-saturated WOOL FELT to give it tensile strength.

On top of these four layers is a REAL MINERAL SURFACE—five layers of protection.

The mineral surface is permanent, fire-proof, and ABSOLUTELY REQUIRES NO PAINTING.

It Needs No Painting

Roofings that require PAINTING are a worry and an expense. Every year or two you have to climb up and give them a coating with some special compound sold by the manufacturers, or you are pretty sure to have a leaky roof.

Amatite is Making Good

We are constantly receiving letters from customers telling us how satisfied they are with Amatite—how much better it is than the old-fashioned roofing.

Year after year, in all weather, Amatite will give you perfect service without any painting or attentionlof any kind.

Surely this is the kind of service that wins and keeps customers.

Free Sample

Before you go to your dealer and buy a roofing, we should be very glad to send you a sample, so that you can see for yourself just what we are talking about—what a solid, substantial, reliable roofing we are offering to the public.

Something Back of It

Remember, in this connection, that Amatite is made by the LARGEST MANUFACTURERS OF ROOFING MATERIALS in the world, and that when you buy this roofing there is something behind it. We stand back of every roll. We know we are offering the best and the most economical ready roofing on the market.

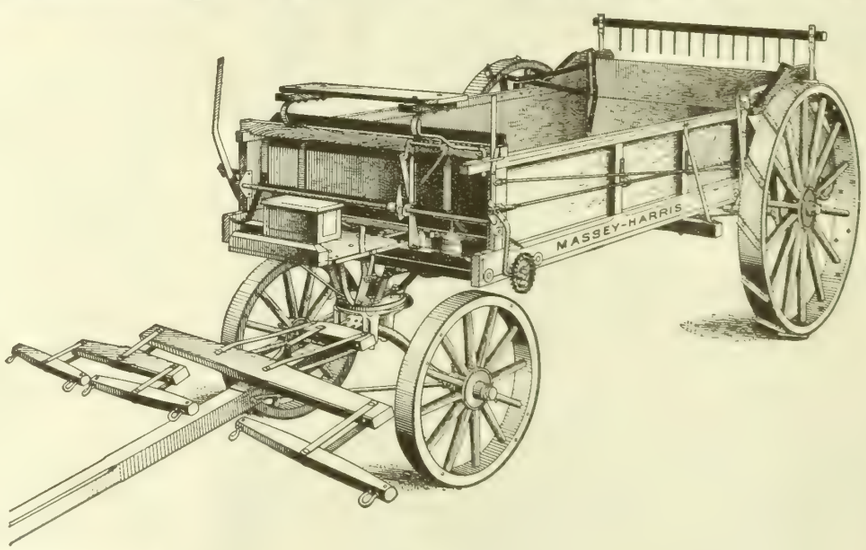
For the sample and booklet address our nearest office.

The Carritte-Paterson Manufacturing Company, Ltd.,

St. John, N. B. - Halifax, N. S.

Amatite on Lumber Sheds of B. F. Harris & Sons, Brushton, N. Y.

Massey-Harris Manure Spreader.



Built very strong because it must carry heavy loads over ground that is often rough and frozen.

Has a Spiral Beater which spreads the manure evenly.

It is simple and easy to operate so your boy can use it as well as you.

It is durable and will last a long time

It is one of the most profitable **Investments** you can make—not an expense.

THE MASSEY-HARRIS CO., Limited, Moncton, N. B.

Is it any wonder that the majority are discouraged ?

Can anyone afford to sell any kind of a dairy cow for $30.00 ?

Supposing she drops her first calf and begins to produce at 2½ years old. He would have to feed and care for her for at least two winters of eight months each or 16 months in all, that would be 480 days and if it was only worth five cents per day, including feed, she would cost $28 00 before she began to produce and it ought to be worth that much to tend her twice a day, to say nothing of feed.

Before closing I also want to remark regarding the letter in your last issue re Help and Scotchman.

I do not believe it is half as hard to get help on the farm, as it is to pay them from profit off the farm, when you do get them I also believe many of our own province men are fully as good help as the imported, though, it is true, they ask more wages than an immigrant, who is landed here with only enough money left to get to his destination, and if our farmers here only had as much profit from their dairy herds as the wheat producers in the West have from their wheat, they also could afford to pay them those wages and then our own boys would be staying with us.

I have been an employer of labor for 18 years and I still have with me the first man I hired and every one in my employ to-day is a Blue Nose and most of them born and brought up in New Brunswick.

Now, Mr. Editor, I realize I am taking up a lot of valuable space, and I will merely say, in closing, in case anyone should think me a pessimist, that every dollar I own (and it is true that is not many) is invested in the Maritime Provinces, some of them in dairy stock and some in a butter factory. This is my home, and I doubt not, always will be, and, therefore, believing, as I do, that agriculture is truly our largest natural asset, I say, "let it be developed."

Let us hear from all, both for and against, because if the idea is right, it needs all your support, if the idea is wrong, point out its weak points.

Yours truly,
E. A. SCHOFIELD.

P. S.—I might add that I fully believe the Dominion Government might well assist our own local government in some such scheme as this bonus, because I have read in the estimate passed at Ottawa this year of $165,000 passed for experimental farms. How much does N. B. get of that ?

$100,000 passed for the development of dairy and fruit industry. Can we not come in for part ?

"SILVER PLATE THAT WEARS"
Known the World Over
Spoons, Forks, Knives, etc., with a world-wide reputation for beauty and long wear, are stamped
"1847 ROGERS BROS."
Discriminating buyers always select silver plate bearing this trade mark. It's the best made.
In buying Coffee Sets, Dishes, Trays, etc., ask for the goods of
MERIDEN BRITA CO.

Louden's Goods are Good Goods.

Hay Carriers, Forks and Slings, Steel Track, Barn Door Hangers and Track, Feed and Litter Carriers, Cow Stalls and and Stanchions, Hardware Specialties.
Write to
Louden Machinery Co., Guelph, Ont.
for Catalogue and Prices.

Growing and Using Corn For Ensilage.

(Continued from page 475.)

Supposing an average crop, say 16 tons, then one ton corn in the silo, ready to feed, would have cost $1.53.

SILOS.

Stave silos are entirely satisfactory. They should, however, be very carefully and staunchly built on a good cement foundation. The cost will run from $1 up to $3 per ton capacity.

Cement silos are very durable and quite satisfactory, if well built. They will cost from $2 to $5 per ton capacity. acity. Care must be taken to build of good material and to strongly reinforce with wires or bands.

The round shape is essential to best results. Where wood is used only one thickness of two inch staves, or one thickness inch dressed lumber in square or straight line walls should be used.

EQUIPMENT.

Cost of extra equipment necessary to start into corn cultivation and ensiloing on a large scale on a Canadian farm.

Double cultivator ....$	60.00
Single cultivator	6.00
Corn harvester	140.00
Corn blower or cut box.....	140.00
Silo—say about	300.00
Total .... $	646.00

Such equipment may be expected to last 10 or 15 years, say 13 years, or $60 a year. The whole cost is likely to be repaid in about three years. The silo might quite possibly last 20 years.

SUMMARY.

1. Corn will grow on any well drained and well manured soil.
2. Thorough soil preparation is absolutely necessary.
3. Corn should not be sown closer than 3 ft. apart in hills, or if in rows, 3½ ft. apart, 8 inches between plants in the rows.
4. Sow varieties suitable for district. Varieties that will mature fairly well are necessary.
5. Keep field well cultivated and free from weeds.
6. Cut in dough stage.
7. Preserve in silo if possible.
8. Mix chaff or cut straw with ensilage when feeding.

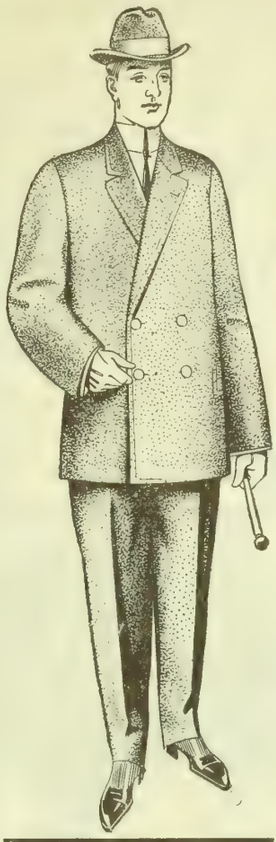
From a Bulletin by J. H. Grisdale, B. Agr., Agriculturist, Central Experimental Farm.

R. A. Lister & Co. Establish a Maritime Branch at St. John.

It will be interesting to many of our customers, agents and others interested in cream separators to know, that owing to the rapid growth of our business, we have found it necessary to move our Maritime branch office to the sea-port city of St. John and are now located in the Globe Building, on Prince William and Water Streets, within twenty yards of the docks. The building is a fine structure and affords us ample room for office and storage purposes. We shall be glad to have all communications addressed to R. A. Lister & Co., Ltd., 82 Water Street, St. John, N. B., where all enquiries will receive prompt attention.

We wish to thank our customers, agents and friends for past patronage and beg to state that we have this year added two new models of cream separators, our size, 2 B and E machines, each of which has a capacity of 720 lbs. per hour and both being easily turned by a boy or girl.

The management of the St. John branch hope to meet as many as possible of our friends at their offie during the Dominion Exhibition, which is to be held in St. John during September next and trust that the change will greatly facilitate business matters for all concerned, and that whilst making many new customers and friends, we may still have the continued support and patronage of our old ones.


PAQUET GUARANTEED CLOTHES

MAKE A PERMANENT FRIEND of Every Man Who Wears Them.

ONCE YOU get into the habit of having your Clothes made for you in the PAQUET WAY, you will never be satisfied with the old-fashioned, "hit-or-miss" Ready Made Clothes Again. PAQUET Guaranteed CLOTHES are cut to your exact measurements BEFORE they are made up at all. That's why we can GUARANTEE them to fit YOU, and not some average type ALMOST your build. Our NEW SYSTEM of Clothes Making is the nearest approach to Custom Tailoring of any system yet devised, and the cost is just about HALF what you would pay for Custom Tailoring of equal style and quality.

We keep your measurements on file, and can make your Clothes for you, at short notice, whenever you need another Suit or Overcoat.

Well Dressed Men in all parts of Canada are now taking advantage of our facilities.

For $10.00 to $14.25 we GUARANTEE you $13.50 to $20.00 values.

THE SUIT ILLUSTRATED

is made from absolutely PURE WOOL navy or black serge, best Indigo Dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unexcelled in this Country. The pockets are made according to our special process and will neither sag nor get out of shape. The real value is $13.50. Our Special Price, PREPAID to any part of Canada..... **$10**

Sizes 36 to 44 only. Larger sizes 75c per extra size.

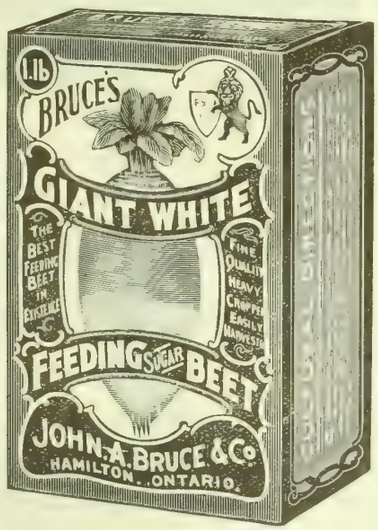
Write for FREE Style Book.

illustrating New York's latest models, and containing samples of the very newest materials for the present season. This book also contains our special self-measurement chart, which is so simple and concise that anyone using it is absolutely certain to be fitted PERFECTLY.

Write NOW ! Don't put it off until another time—a postcard will do—you'll get the Style Book by return mail.

THE PAQUET COMPANY LIMITED.
QUEBEC, - CANADA.

Bruce's Giant White Feeding Beet



Leaders of all tests at the Ontario Agricultural College, Guelph, since their introduction.

These grand Feeding Beets, introduced by us in 1900, combine the fine rich qualities of the sugar beet with the long keeping, large size and heavy cropping qualities of the mangel. The roots are clean and tops small, white flesh, solid, tender and very sweet, and on account of the bigger part of length growing out of the ground they are easily harvested. They will outyield all the other kinds of Sugar Beets and Mangels. The roots are the largest, handsomest, most uniform and cleanest of all Sugar Beets, and this, combined with their great richness and easy harvesting quality, makes them the "beau ideal" of a root for the farm. To show what a grand root we have and how it is capturing the trade, we give our sales—1900, 43 lbs.; 1902, 1954 lbs.; 1905, 4327 lbs.; 1907, 9800 lbs.; 1909, 21421 lbs. We offer in two colors, white and rose, each 1-4 lb., 12c; 1-2 lb., 18c; 1 lb.; 30c, postpaid.

FREE—Our illustrated 104-page Catalogue of Vegetables. Farm and Flower Seeds, Bulbs, Plants, Implements, Poultry Supplies, etc.—Send for it.

JOHN A. BRUCE & CO., LTD., Hamilton, Ont.
SEED MERCHANTS. ESTABLISHED 60 YEARS.

Foundation of Successful Dairying.

(Continued from page 480.)

A very important part of dairying is to make it profitable all the year around. In order to be successful you must imitate in winter what nature provides in summer, such as permitting plenty of sunlight to enter the stables, as sunlight destroys germs; warm quarters with plenty of fresh air, clean water with the chill taken from it, succulent feed, such as ensilage, clover or alfalfa hay, and a reasonable amount of other grains that any farmer can raise on his farm.

In selecting and buying cattle, select the most healthy looking animals and then determine positively with the tuberculin test as to whether or not they are free from tuberculosis. Select dairy cows that have every indication of milk producers but determine this positively by the use of the Babcock test and scale. Select a dairy breed of cattle whose product and offspring will bring the highest possible price in any market and you will surely be successful in dairying. – DR. DAVID ROBERTS.

The Horse Show in Kentville.

The fourth annual Horse Show, held under the auspices of the Kentville Board of Trade on Tuesday, April 26th, was a success in every particular, the appeals of the committee having been responded to very liberally by all upon whom its members called for financial assistance, while the clerk of the weather furnished an indeal day for both man and beast, and these, with an entire list of over 60 horses, with the throngs in attendance, easily place these by far the best of thoroughly enjoyable exhibitions.

Promptly at 10.30 a. m., the horses entered in the show, under the guidance of Barry Roscoe, Esq., who filled the arduous position of marshal in a very creditable manner, started from in front of the post office on their parade through the principal streets of the town, headed by Kentville Brass Band, whose well rendered selections were thoroughly enjoyed by the crowds thronging the streets, through which the procession passed.

At 2 p. m., Dr. Standish began the judging, and from that time till nearly six o'clock the many eager spectators awaited his decisions, and when the awards were announced the admirers of the winners greeted the fortunate ones by bursts of applause. Below we give the winners :

Class 1.—Standard Breds—4 enteries, 1st, Mabel G., L. E. Baxter, Canning; 2nd, J. R. Blanchard, Upper Dyke; 3rd, Lady Brookside, S. A. Bowser, Grand Pre.

Class 2.—Roadsters—12 entries, 1st, M. E. Parrish, Kingston Station; 2nd, Fred W. Clarke, Welsford; 3rd, A. L. Pelton, Berwick.

Class 3.—Carriage—8 entries, 1st, R. S. Starr, Starr's Point; 2nd, R. S. Eaton, Kentville; 3rd, John Redden, Kentville.

Class 4.—10 entries—General Purpose, single, 1st, E. O. Eagles, Kinsman's Corner; 2nd, A. L. Pelton, Berwick.

Pair General Purpose—3 entries, 1st, G. W. Trenholm, Grand Pre; 2nd, Wm. Tully, Kentville; 3rd, J. H. Pullen, Falmouth.

Class 5.—Draft—3 entries, 1st, Elmo Miner, Gaspereau; 2nd and 3rd, J. H. Lyne Evans, Church Street.

Class 6.—Saddle—10 entrie, 1st, Miss Francis Lydiard, Kentville; 2nd, R. S. Eaton, Kentville; 3rd, Miss DeWolfe, New Minas.

Dr. Standish, a veteran in the show ring, awarded the prizes to the best horses, giving his reasons to his audience.

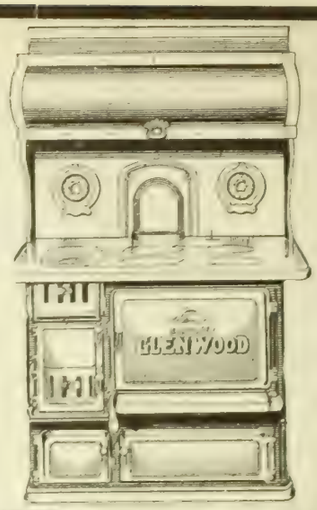
In the General Purpose class there appears to be a misunderstanding among the exhibitors as to the characteristics of this class; according to the rules laid down by the horsemen, and by which Dr. Standish abided. A general purpose animal is a good saddle horse, has the high knee action of a carriage horse, combined with the speed of the roadster, while the exhibitors of most in this class understand this horse as a good animal to work anywhere and a fairly good driver. These the Dr. classed in the agricultural class, and stated that the horses of the agricultural class, as shown, were worth much more to our farmers than the general purpose animal, as defined.

The meeting in Pastime Hall, in the evening, was fairly well attended by an audience, supplying in quality and interest, what they lacked in numbers.

President J. W. Ryan, while introducing the speaker of the evening, Dr. Standish, referred to the much better class of horses in the county at present than at the time he had organized the squadron of cavalry from which had originated the K. C. H.

Mayor H. H. Wickwire, in moving a vote of thanks to Dr. Standish, complimented the committee on the success of the show and expressed the wish that in the near future suitable quarters, accommodating the horses entered, a proper place for the judging and the establishment of a horse market, in connection with the show, would be additions of the not far distant future. Chairman J. R. Webster seconded the motion, which carried unanimously.

Don't Hold the Cents Too Close to the Eyes and You Will See the Dollars to Better Advantage.



In offering our Glenwood Ranges we are offering you something that has been tried and proven to give satisfaction. Ranges that have all the requirements that are of any advantage to a stove. We have removable nickel that fastens with a patent spring, removable grate devide centres that are interchangeable, ring cover, patent shaking grate, etc. We have sold in the month of April 51 Ranges in St. John, which goes to show what the people think of a home industry. We have one price for everybody. Send for booklet and prices. We prepay freight to your station.

McLEAN-HOLT & CO., - 155 Union St., - ST. JOHN, N. B.

EASY TO ROOT OUT.
THE LARGEST AND BEST
ROOT CROPS
JUST AS SURE AS YOU'RE SURE OF ANYTHING IF YOU USE
STEELE - BRIGGS SEEDS
STEELE BRIGGS SEED CO. LTD.
HAMILTON-TORONTO-WINNIPEG

CORRUGATED
PORTABLE
GRANARIES

Fire, Lightning and Storm Proof.

Protects the grain—absolutely vermin proof. Write for particulars—

THE

Metallic Roofing Co.,

LIMITED,
MANUFACTURERS,
TORONTO and WINNIPEG.

FLORICULTURE.

All enquiries in this department will be answered by H. E. Gould, Florist, Sussex, N. B.

INQUIRER:—I have a lot of pansy seeds. Please tell me what kind of soil on which to plant them. Should they have the shade?

ANS.—The soil wants to be heavily fertilized with phosphate or cow manure, for pansies attains mammoth size only in rich soil. Make a circular bed for pansies for the reason that they show to better advantage in such bed It is well to have no other flowers growing in the same bed with your pansies. I have seen pansies growing about a central plant as a Geranium or rose bush and the effect is not good, neither plant shows to its best advantage. Pansy plants will grow large and a dozen will fill a good size bed if the soil is rich.

"As soon as my pansies begin to bloom freely, I pick the bloom each day," says a pansy lover, the pansies, like the sweet pea, nasturtium and violet, thrives best when blooms are plucked regularly outhewise the plants soon exhibits undersized flowers with short stems, or in common parlance, goes to seed."

After the pansy bed is made and the young plants are set out they must be kept damp. If there is not sufficient rain and there are indications of a drouth, they must be watered artificially. The plants soon become dry and turn yellow with the heat. The pansy grows especially well in either sunshine or shade. It is of advantage to know plants that thrive well in shady places for every yard has such spots. I have planted pansies about trees with good effect I do not place the plants too near the trunk of the tree but plant them a distance of about a foot and a half away. I once made a mistake of planting pansies too near the base of a lilac tree and the new shoots of the lilac springing up rapidly chocked my pansy plants, which had to be transplanted.

Great care must be taken with pansy plants throughout the season. I generally renew the phosphate once during the season, if the plants begin to send out smaller blossoms. Besides keeping the beds moist, they must be hoed frequently. This is done not so much for the purpose of keeping the beds free from weeds as to loosen the soil about the roots of the plants. The soil about my pansy plants is clayey and becomes so hard that if I did not work over my pansies they would soon decline.

Your sample leaf is the Chinese Primrose, one of the oldest forms in cultivation. The great improvement in both the leaves and the flower is almost as wonderful as in the case of the Chrysanthemum. At first the flowers were small and lilac in color, but now one can purchase seeds for almost any shade desired, ranging from white to blue and there are also double and semidouble varieties.

New Marketing System for Eggs and Poultry.

In South Australia there are 21 'egg circles' with a membership of over 700, consisting principally of small farmers. The secretary of each centre receives, tests and grades the eggs, pays cash for them at the current market rate, and sends them to the government cool stores at Adelaide. The government does the marketing and at the end of each quarter any profits are divided among the supplies. Each secretary receives 1-2 d. (one cent) per dozen for the eggs he handles.

Under this system there is no middleman's profits Grading and testing is very strict and no egg under 2 oz. in weight is passed. It is now recommended by the state poultry expert that 15 centres be established in Victoria at an initial outlay of £1,5,00, which, under his scheme, will speedily be repaid. It is anticipated that if this course is followed out, the production of eggs and table poultry will so increase that, instead of the value being £1,750,000, as it is now in Victoria, it will in five years reach £5,000,000. Special attention will be given in providing pure stock of first class egg producers.

Remedy For Black Flies on Ducks.

In the Maritime Farmer of April 12, page 416, Mrs. W. R., York Co., N. B., asked for a remedy for black flies on ducks. After a few years' experience in duck raising, we found an easy way to rid the ducks of flies was to keep them in a cool, dark building for a few days at a time while the plague lasted. It seems that a brood of flies live three or four days and they will destroy many ducks in that time if allowed; but if the ducks are kept in a building day and night during that time the flies leave them and go on the windows. When this lot of flies is gone the ducks may be set at liberty for some length of time, until the coming of another brood of flies, when it will be necessary to shut them up again.

One point in duck raising that demands attention is keeping pens clean and dry. Dampness and unclean pens tends to start catarrh, which kills them very suddenly. Increasing vigilance is the price of ducks. How would it do to have them hatched in August?

A. B.

Sunbury Co., N. B.

Owing to the short time required, 10 to 12 weeks, for raising ducks for market purposes we would think August hatched ducks would do all right, but the prices realized at that season of the year might not be so renumerative as that received for ducks hatched and sold at an earlier season.

Do Not Kill Failing Animals.

The farmer, who butchers his own meat, should see to it that his animals are gaining in flesh at the time of killing. We have been told by butchers that even an old cow, if put on heavy feed for a while, will yield as good a quality of beef as a young animal that has been shrinking badly just before killing. With an animal failing in flesh, the muscle fibres are shrinking in volume and contain correspondingly less water. As a consequence the meat is tougher and drier. When an animal is gaining in flesh the opposite condition obtains, and a better quality of meat will be the result.

SAVES —MONEY— —TIME— —WORK—

AND REALLY COSTS NOTHING

You can easily afford this handsome, practical kitchen necessity. For our special offer (please send for details of it) lets you pay for it out of what it actually saves in lessened grocery bills. You should ask us about it at once.

Whole Table-Top one heavy sheet of

BRIGHT ALUMINUM

You cannot begin to know the CHATHAM by this picture, for the picture cannot show even one of its most pleasing and valuable features—the SOLID SHEET OF BRIGHTLY-POLISHED HEAVY ALUMINUM that forms the covering of the table-top and extension leaves. This ALUMINUM is extra-heavy weight, pure metal—LOOKS LIKE SILVER—LASTS LIKE STEEL—cannot rust—won't gather dust or dirt—easily cleaned—simply perfection! And this is the ONLY kitchen cabinet you can buy with an aluminum top--which ADDS FULLY FIVE DOLLARS TO ITS VALUE. Yet you pay NOTHING EXTRA for it!

YOU MUST SEE IT TO KNOW IT

You must see the Chatham Kitchen Cabinet to appreciate how handy, compact, sensible it is. Exterior of specially-selected black ash, hard as rock and beautifully polished. Panels of golden chestnut. Bakeboard, drawers and flour-bin of snow-white basswood.

With the CHATHAM everything you use in cooking is at your fingertips. You can get meals ready sitting down. Your flour-bin (metal lined—holds 75 pounds!) is right under your hand in easy reach. Sugar bin (opened or closed by a touch) is just in front of you. Six air-tight canisters (free with every Chatham Cabinet) stand in the shelf-rack. Big, dust-tight drawers hold spoons, egg-beater, funnels, strainers, etc. ample closets for kettles, pans and the like.

Everything in its place And you can tidy up as you go along when you have a CHATHAM. There is a **Easily moved to sweep under** place provided for all the things you now walk back and forth for, between pantry and table. The CHATHAM spares you all those countless steps. Cupboards for jams and tinned foods; three roomy drawers (besides the two large ones) for small packages. High top makes a fine shelf for dishes—enclosed on three sides, and a rod at the back as a plate rack. Fine French plate mirror in center door—fix your hair in a second if any one comes. The CHATHAM is mounted on ball bearing castors. You can readily move it when you are sweeping up. Yet it is most solidly built—nothing shaky or wobbly about it. Whole thing is dust-tight, mouse proof—a permanent, durable, satisfying kitchen help.

YOU SHOULD NOW INVESTIGATE

Yet, with all these conveniences—features found in nothing else—the cost of a CHATHAM is probably less than you imagine. You should write us for the address of our agent nearest you. He can name you a price that will surprise—and he will gladly show you the Cabinet and point out its merits. Allow us to send you illustrated, explanatory

FREE BOOK

JUST ADDRESS

We use one of my Cabinets in my own home; and the women-folk say frankly that they simply could not get on without it. It certainly does cut kitchen-work square in half. And I know we build it so well it can safely be GUARANTEED to you.

MANSON CAMPBELL, President

THE MANSON CAMPBELL CO. LIMITED

CHATHAM, ONTARIO

Makers of the famous Chatham Fanning Mill

12

Bacteria.

In reply to a list of questions re bacteria, sent by Box 114, Mahone Bay, N. S., we would say :

There are various forms of bacteria in the soil that are especially beneficial to the farmer, as will be seen by a persual of the article by Prof. Cumming, in our first April issue, entitled "Bacteria in Relation to Rural Life."

We have forwarded a marked copy, containing said article, to the above address.

The bacteria referred to by the American Magazine are those that live and form nodules on the roots of clovers and other leguminous crops, such as vetches and peas.

Each one of the foregoing plants has its own particular variety of bacteria. The bacteria essential for the growth of alfalfa will not do for red clover and the various kinds of clover require their own particular bacteria.

The value of this particular class of bacteria is their value as nitrogen collectors. They collect the nitrogen from the air and store it in the nodules on the roots of the leguminous crops. Nitrogen is one of the most expensive constituents of fertilizers, hence the growing of leguminous crops is the cheapest way for supplying this valuable element to the soil for the use of other crops.

Potash and phosphoric acid, the other essentials for plant growth, must be supplied in some commercial form.

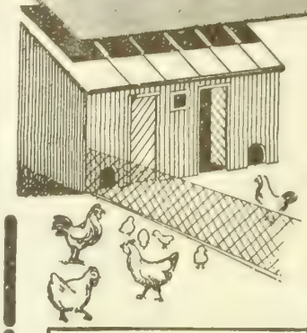
Bacteria, for the various leguminous crops, may be procured from the Agricultural College, Truro, N. B.

Prevent Sore Shoulders.

The following hints from Dr. Glover, of the Colorado Agricultural College, are timely. Too much care can not be executed in seeing that the collar is a perfect fit. A collar which is too large is more likely to injure the horse than one that is too small. The collar should be scraped each morning and carefully cleaned before it is again put on the horse. Before the spring work begins, it is well to oil the harness and have it soft and pliable. For the first few days of hard work on soft ground, the shoulders of the horse should be bathed in cold water every night, after the harness is removed. The horse will be very sore and tired for a few days and should be given every kind of attention Watch the harness to see that the draft is at right angles with the shoulders. If it is too low, the collar will be constantly kicking up at the top and the horse will soon have a sore neck. If the draft is too high, the collar will not rest securely on the lower part of the shoulder, where the horse is best prepared to throw his weight. If there are any calloused lumps on the horse's shoulders or back, they should be carefully removed before the busy season. If the collar is put on over one of the "sit fasts," it will have the same result as a man trying to walk with a button in his shoe or a bunion on his foot.

This article is not for the purpose of suggesting treatment for bruised shoulders and sore neck, but simply as a reminder that as spring approaches an ounce of prevention (by having the horse and the harness in good condition before beginning the spring work) is often worth pounds of cure later on when the horse is disabled and you are deprived of his services for weeks, right in the busy season.

PAROID ROOFING



David Harum knew the horse business, but even David himself could never have sold you a horse on his mere say-so. You'd want to see the horse—want positive evidence of his "good points" before you'd pass over a dollar. Good horse-sense too!

Why not use common-sense and caution when it comes to buying roofing? A roof costs money. It takes time and money to apply it whether it is good, bad or indifferent. And a bad or indifferent roof will cost you a lot of money in the long run. You want **wear** when you want roofing. Wear is told by **actual duration**—not fanciful claims and slyly-worded guarantees. That's exactly why you should insist on **Paroid Roofing.**

More than likely your dealer can show you a Paroid Roof, or tell you where you can see one. Send us your name and address and we'll tell you where you can see a Paroid Roof if your dealer can't show you one.

Paroid Roofing is one of the famous **Neponset Products.** The "Little Girl" Trade Mark is your protection—a guarantee of quality and durability. We will replace any Neponset Product or refund your money if it proves defective in manufacture. Look for the "Little Girl" Trade Mark.

OUR OFFER

When you see Paroid on your roof—if it is not satisfactory tell us and we will send you a cheque for the cost of the roofing and the cost of applying it. If any Bird Neponset Product ever proves defective in manufacture we will replace it. If a broader guarantee than this could be made we would make it.

BIRD NEPONSET PRODUCTS

N.B.—Write to our Building Council Department for free information concerning any building problem you may have to solve. Give full particulars and state exact dimensions. Write for samples of Neponset Products and we will give you name and address of your nearest dealer.

F. W. BIRD & SON, 501 Lottridge Street Established in U.S. 1795 **HAMILTON, ONT.**

Western Branch—123 Bannatyne St. E., Winnipeg. Eastern Branch—144 Union St., St. John, N.B.

2271

Maritime Wire Fence Stands the Strain

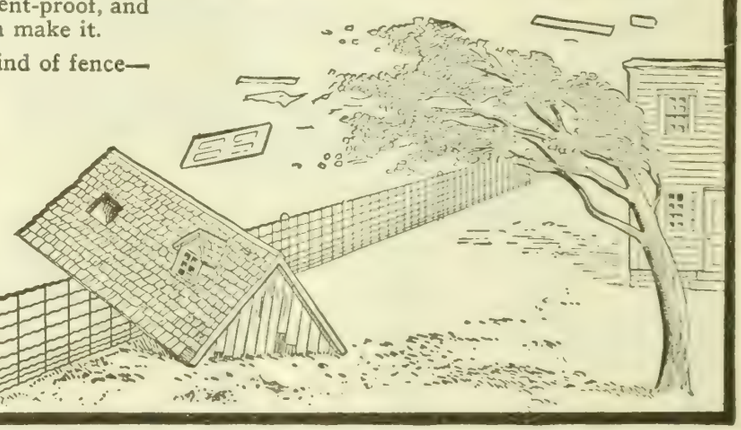
of unexpected accidents, without a flinch. It holds under the most trying conditions. Maritime Wire Fence makes good because Maritime material is first quality, and Maritime workmen excel in their calling.

All Maritime Fence is made from extra heavy smooth No. 9 wire, so thoroughly galvanized that it won't peel. The Maritime lock holds the joints so rigidly that they can't give or pull out of shape. Maritime Fence is rust-proof, accident-proof, and as near wear-proof as man can make it.

8 Maritime Fence is your kind of fence—made as you would make it yourself—if you could. Maritime Fence is true economy for you. It is made and sold upon honor. Costs no more than inferior fence. Send now for our free fence booklet. Tells you everything you want to know about fences. Write while you are thinking of it. It will pay you,—pay you well.

New Brunswick Wire Fence Co., Limited
Moncton . . . . . New Brunswick

MARITIME WIRE FENCE

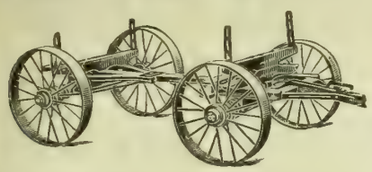


ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles, They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

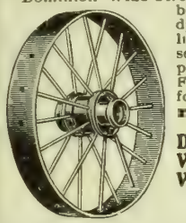
Address—**MARITIME FARMER, ussex, N. B.**

Buy This Wagon.



Dominion Wagons are strong, low loaded easier than high wagons. Changed to platform pattern instantly, easily. Halves labor. Saves time. Easy on horses. Easy on your pocket book. Built to **last**. Can't break. Can't rot Cuts repair bills.

Dominion Wide Tire Low Steel Wheels—best for stony or muddy roads. Cheaper, lighter than wood. No setting tires. Cold proof, Last a lifetime. Fit all axles. Write for free catalogue **now.**



Dominion Wrought Iron Wheel Co., Ltd.,

Orillia, Ont.

Shall We Sow Grain Thick or Thin?

One often sees the question raised in the agricultural press whether better results are obtained by sowing cereals thick or thin, and both methods find advocates who strongly recommend one or the other according to their personal experience. This divergence of opinion is natural because the problem depends on varying factors. It is impossible to lay down precise rules which are applicable to every case.

The character of the soil is undoubtedly the chief factor. If the soil is eminently suitable for the crop the seeds can be sown more sparingly than in cases where the soil is not so well adapted, and in this connection the natural fertility of the land and the nature of the previous crop have to be considered. Assuming a soil rich in plant food, it will produce stronger plants, requiring more space for their proper development. The growth of each single plant is freer and better, more room is allowed to the roots to find their supply of nourishment, and the more freely their leaves are exposed to the beneficent influences of sunshine and air. Therefore, in good soils a superfluous liberality of seed is so much waste, and indeed an injury to the crop.

On the othet hand, on poor soils and on soils not sufficiently prepared, lumpy, or subject to weeds, it is judicious to sow more freely. Similarly, if the ground is either very dry or wet in character, or subject to insect pests, seed should not be stinted.

Again, the quality of the seed is an important factor. Heavy, well-formed seed with good germinating power can be sown more sparingly than seed of an uncertain and inferior quality.

We should say also that the date of the sowing operation has an influence on the question. As a rule, early sowing needs less seed than a later sowing. In the firsye case the roots have more time to seek nourishment, and the plants may be expected to develop more strongly.

And finally the method of sowing must be taken into account. Seed broadcasted must be sown more thickly than seed entrusted to the ground by a drill. It is not possible to sow by the hand so evenly, nor is the seed deposited at a uniform depth. Some grains certainly remain on the surface and fail to germinate, so that the use of a sowing machine is a real economy.

A full and satisfactory crop does not by any means always follow a thick sowing. Consideration of all the circumstances must be given if the best results are to be obtained.

Halifax Prices.

GRAIN—Oats, 55c.

FEEDSTUFS.—Bran, $23.50 to $24.00; shorts, $27.00; middlings, $26.50 to $27.00; oil cakes, $2.15; gluten meal, $1.50 per bag; corn meal, $1.60.

DRESSED MEATS.—Beef (carcass), 9c to 10 1-2c; beef (retail), 15c to 25c; mutton, 8c; veal, 7c, lamb, 12 1-2c; pork, 11c.

HORSES.—Drafters, $250 00 to $350.-00; roadsters, $300.00; carriage, $175.-00 to $250.00.

DAIRY PRODUCTS.—Creamery prints, 32c; creamery solids, 31c to 32c, dairy prints, 26c to 29c; dairy butter; tubs, 25c to 26c; cheese, twins, 14c to 14½c; large 13c to 13½c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 19c; flowl, 11c; chickens, $1.25 to $1.50 pair; ducks, $1.25 to $1.75 pair; turkeys, 18c fresh goblers.

FRUIT —Apples, $2.00 to $1.00.

VEGETABLES.—Carrots, $1.15; potatoes, $1.10 to $1.25; turnips, $1.00; beets, $1.50.

MISCELLANEOUS.—Hay, $15 00 to $16.-00; straw, $10.00; wool, 21c to 22c; beef hides, 10c to 10½c; calf skins, 15c to 17c; sheep skins, 95c to $1.10; lamb skins, 10c to 15c.

MARKET REVIEW AND FORECAST.

BUTTER continues very scarce. It is practically impossible to get any good dairy, in either tubs or prints. In creamery the supply does not equal the demand, owing to the scarcity of dairy. Several lots of rolls have been brought in from Ontario this week, costing 28c landed here.

EGGS continue to come forward freely and are holding at the price quoted.

CHEESE.—Fooder cheese is now more freely offered and at lower prices.

STOCKS are light and will bring prices quoted.

St. John Prices.

MEATS.—Beef, 7c to 9c per lb.; mutton, 8c to 9c per lb.; pork, 10c to 11c per lb.; lamb, $2.50 to $4.00 each; veal, 5c to 7c per lb.

DAIRY PRODUCTS.—Butter, in tubs, 22c to 25c per lb.; butter, in rolls, 22c to 25c per lb.; butter, in prints, 24c to 26c per lb.

POULTRY AND POULTRY PRODUCTS —Eggs, 17c per dozen; fowl, $1.00 to $1.30 per pair.; turkey, 20c per lb.

VEGETABLES.—Potatoes, 90c to $2.00; turnips, 60c to 65c.

Butter and eggs are in good demand. The market is well supplied with veal.

Prince Edward Island Prices.

MONTAGUE dealers are paying 42c a bushel for oats, 22c to 25c a bushel for potatoes, 16c a doz. for eggs, 10½c a pound for pork, 22c a pound for butter and 8c to 9c a pound for hides.

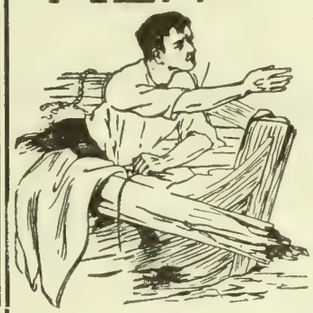
SOURIS MARKET PRICES :—Potatoes, per bushel, 28c; oats, per bushel, 42c; pork, per lb., 10½c; beef, per lb., 16c; butter, per lb , 27c; eggs, per dozen, 18c; hides, per lb., 3½c, and hay, per ton, $12 to $14.

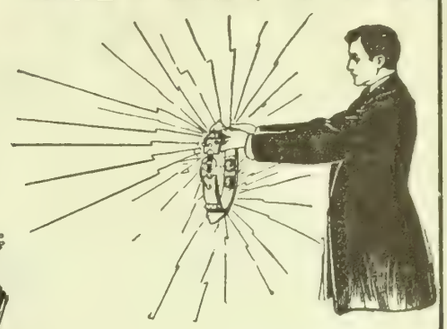
ALBERTON PRICES :—White and black oats, per bushel, 40c; butter, per lb., 17c; eggs, per doz., 16c; pork, per lb., 10c; hides, per lb., 8½c; loose hay, per ton, $10; pressed hay, per ton, $11, and beef, per qr., 7c to 8c.

IN CHARLOTTETOWN there is a general laxity in products in the city market. Quotations differ very little from those last reported. Fowl, ducks and chickens are quoted at 9c to 12c a pound, black and white oats at 40c to 46c a bushel and potatoes at 20c to 30c a bushel, in both the retail and dealers' prices.

Have any of our potato growers experimented with flowers of sulphur dusted over cut seed to prevent scab? Those who have tried it say the success has been nearly perfect. Their plan is to cut into a tight box and then sprinkle the sulphur in layers, and stir or shake until each piece is coated. Those who object to corrosive sublimate or formalin may find here a substitute. If any have tried sulphur let's have report of results through the Farmer.

"A LIFE SAVER FOR WEAK MEN"





Give me a man broken down from dissipation, hard work, or worry from any cause which has sapped his vitality. Let him follow my advice for three months, and I will make him vigorous in every respect as any man of his age.

I will not promise to make a Hercules of a man who was never intended by Nature to be strong and sturdy. Even that man I can make better than he is; but the man who has been strong and has lost his strength I can make as good as ever he was.

I can give back to any man what he has lost by abuse of the laws of Nature.

You Run No Risk in Using My Belt. I Take All Chances

Do you doubt it? If so, any man or woman who will give me reasonable security can have my Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED

Dr. McLaughlin: Peterboro, Ont.

Dear Sir: I am very thankful to say that I feel much better, both in strength and health. My back is not like it was, for I can do a day's work now much easier than I could before using your Belt. I now wake up in the morning feeling fresh, not like before, when I had that languid feeling. I have more life in me now. I am well satisfied with the Belt. I only wish I had obtained it before. Yours Truly,

A. RICKARDS.

Every man should understand that physical power, large muscles and strength of endurance come from animal electricity. My treatment will pump every part of the body full of that and perfection will result.

It not only restores vigor and increases nerve power, but it cures rheumatism, pains in the back and kidneys, indigestion and constipation, and all troubles which result from weakness of any vital organs.

FREE BOOK—Cut out this coupon now and mail it. I'll send this book without delay, absolutely free. Call if you can.

M. McLaughlin, 214 St. James St. Montreal CAN.

Dear Sir: Please forward me one of your Books, as advertised.

NAME .....

ADDRESS .....

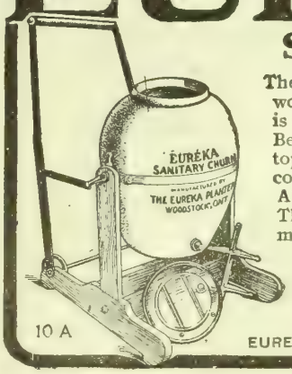
Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 8.30 p.m.
Write plainly.

While rejoicing at the remarkable interest in setting new orchards it will be well to bear in mind that the man who does not take care of his old trees will not properly care for the new, and that no young orchard can thrive when located near by or in connection with old neglected trees. If orcharding is to be made of any account the old trees must be cleaned up and the worthless stuff cut down and destroyed.

GIRL WANTED.—Good wages and steady work for a general girl. Apply to B. F. BLANCHET, Rothesay, N. B.

EUREKA

SANITARY CHURN



There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass.

Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn.

Also made with Aluminum top.

The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remain upright.

If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue.

10 A

EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwich, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N.B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

R. J. Messenger, Bridgetown, N. S.
John A. Hughes, Petitcodiac, N. B
The S. H White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens. 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex N. B
Syd. J. Goodliffe, Sussex, N. B.
Fred. S Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son, Chipman's Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N.S.

Oxford Down

Fred. S. Black, Amherst, N. S.

Cotswolds.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.

SWINE—Berkshire.

J. R. Semple, Brule, Col. Co., N. S.
Howard W. Corning, Cheggogin, Yarmouth Co. N. S.

Yorkshires.

The S. H. White Co, Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
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W. H. Moore, Scotch Lake, N. B.
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POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.
S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns,
W J.M McLeod, Loch Lomond, West N. S., Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J McLEAN & SONS Hopewell, N. S.

SHORTHORN BULLS for sale, WALTER EATON, Upper Canard, Kings, N. S.

S. C B. LEGHORN and White Pekin Duck eggs at $1 00 per setting. Mention this paper. C Y. YOUNG, Digby Co., N. S.

SINGLE COMB BROWN LEGHORNS only. Circular. ROCKWOOD POULTRY YARDS, St. John, N. B,

FOR SALE one choice Shorthorn Bull 22 months old, girth 6 ft. 1 in. Sure stock getter, WYLIE REID, Oxford, Cum. Co., N.S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—One Guernsey bull, one year old, grand son of Cassiboio's Anchor, 9685, A. S. C. C. Apply to WILLIAM COX, Canard, Kings Co., N S

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS , Galt, Ont.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc, Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

THREAD POWER FOR SALE.—I have a two horse Moody thread power that I will sell cheap and on easy terms. The thread power is in a good state of repair and has not been used extensively. For particulars, write "Power" care MARITIME FARMER, Sussex

BRITISH COLUMBIA—Are you interested in British Columbia? Send postal for free sample copy of Vancouver Daily World and full particulars of their great dot contest. Two premiums of $25, a month for life are among the prizes. Send at once. THE WORLD, Vancouver, B. C.

EIGHT BLACK MINORCAS

And we won 6 Firsts, 1 Second and a Third at the Amheret Fair.

EGGS FOR HATCHING FROM THESE BIRDS

For The Chicks Purina Chick Food. Fresh Ground Alfalfa Meal. Bone and Meat Meal. Fresh Beef Scraps. **Other Poultry Supplies.**

KINGSDALE FARM COMPANY, SUSSEX, New Brunswick.

CHESTER PIGS FOR SALE, registered stock. GOWAN BRAE FARM, Bathurst Village, N. B.

BANNER OATS and Mandschueri barley for sale for seed, recleaned and good quality oats, scored 94 points in field competition. Write for prices. J. R. SEMPLE, Brule, N. S.

SITUATION WANTED by Englishman aged 42, to manage dairy farm or herd. Used to Jerseys, (pure bred), calf raising butter-making, pigs, poultry. Box D, MARITIME FARMER, Sussex, N. B.

CHEESEMAKER WANTED—A first class cheesemaker is wanted to take charge of the Solmonhurst cheese factory for the season of 1910. Apply at once stating particulars and giving references to ANDERS J. JENSEN, Solomnhurst, Victoria Co., N. B

SITUATION WANTED—Am a young man, use nei her tobacco nor liquor, and would like position on a dairy or poultry farm. Have not had much experience, but have always lived in the country and know something about farming. Anyone wanting my service will kindly write EDWARD J. KELLEY, Brookdale, Cum' Co. ,N. S

CORRESPONDENCE WANTED.—A young farmer aged 33 years in comfortable circumstances, tall, dark complected, considered good looking and stylish, well educated and refined, would like to correspond with young ladies under 30 years of age with a view to matrimony. Will some educated, refined protestant ladies residing in N. B, please write good description of self etc. in first letter. Farmers daughter or those preferring farm life preferred, no objection to widows. All correspodence strictly confidental. Address X. Y. Z., N. B., care MARITIME FARMER, Sussex, N. B.

Barred P. Rocks.

Our claim to be the foremost breeders of this variety in Eastern Canada has been established by ten years of the keenest competition in the show ring with this class of birds. Our latest triumph at the Amherst Fair, winning, for the second time, the silver trophy for the best cock, hen, cockerel and pullet, of any variety, and the specials for the best shaped and the best colored bird of this kind, seals the fact. First cockerel, first pullet, first hen and second cock at Amherst means quality now. First cockerel, first hen, first pen and second cock at Halifax, all in one year, endorses it. Stock and eggs for sale. Satisfied patrons our aim

CRAIG BROS. - Amherst, N. S.

Eggs for Hatching.

From pen pure bred White Wyandottes headed by imported cock from U. S. A. pullets from guilds bred to lay. W. Wyandottes belonging to a 237 egg strain. $1 00 for 15. Will exchange eggs for good strain Rhode Island Reds, rose comb.

O C JONES.
Box 77, Digby, N. S.

Anybody Can Hatch Chickens With A Buckeye Incubator.

Simple, self-regulating, complete—the only incubator sold on 40 days free trial with money back in case of failure. 10,000 sold last season and not one returned, 100,000 in use. Send for books telling how Buckeye owners got 51 chicks for 50 eggs, and "Making Money the Buckeye Way," Both are free to you.

G. H. SEAMAN,
Box 601, Moncton, N. B

Eggs For Hatching.

From Single and Rose Comb R. I. Reds, Columban Dottes, Black Javas, $1.00 per setting for balance of season.

W. H. HENRY,
Shubenacadie, N. S.

Farm For Sale.

240 acre farm at Kignston, Kings Co., within 5 minutes walk of Consolidated School, church, post office, telephone, etc., containing good 2½ story house, 2 large barns, ice house and other buildings About 50 acres under cultivation, balance pasture and woodland. Easy terms. For particulars apply to

F. W. SHORT, Agent,
Brown's Flats, N. B.

A good business stand for sale.

EGGS

that will give you winners at the fall shows in 1910. I have mated up three yards of single Comb buff Orpington birds. Every bird in these yards are Exhibition show birds of large size and great layers and Buff to the skin, and from the best strains in the world. Eggs, $2.00 per 15 or $3.50 per 30 eggs. Unfertile eggs replaced at half price.

Tantramar Orpington Farm,

Box 31 Sackville, N. B

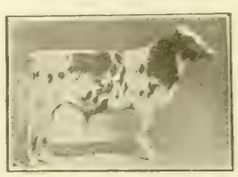
Meadow Brook STOCK FARM
CHATHAM, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires

Importers and Breeders of Pure Bred Clydesdales, Hackneys and Shorthorns.

We invite your inspection of Stock

John Bennet, Supt **J. B. SNOWBALL & CO. Ltd. Props**



Wish - Ton - Wish Stock Farm.

HOLSTEIN CATTLE,

We are offering several heifer calves as well as some good bull calves, also a young cow or two, due to freshen in May or June. Inspection invited. Correspondence solicited

HARDING BROS., Props.,
Welsford, Queens Co., N. B.

Western Farm Lands For Sale.

In sections, half sections and quarter sections of the best wheat lands in Sask. Wonderful terms to farmers wishing to occupy and work the lands. For particulars and terms write

Clair T Elderkin.

The Western Real Estate man.
P. O Box 73. Amherst, N. S.

FOR SALE

My farm comprising about 200 acres, nearly 100 under the plow, cuts seventy tons of hay per year, situated about 1-4 mile from the centre of the town of Oxford. Buildings are in good repair with excellent water privileges also good milk route in connection. For further particulars apply to

WYLIE REID,
Oxford, Cum. Co., - N. S.

Strawberry Plants.

Vigorous plants! best varieties, $3.00 per m. Special prices on large orders.

W. O. CREIGHTON,
Riverside Fruit Farm,
West River, Pictou Co. N. S.

Ayrshire Cattle and Oxford Down Sheep.

Heard headed by the grand good bull Choice Goods of Springhill, four years old, sired by the noted bull Lessnessock King of Beauty. Choice Goods can be spared from Springvale, to avoid inbreeding. Has proved himself a good sire and a sure stock getter

FRED S. BLACK,
Springvale Farm, Amherst, N. S.

If you have Live Stock for sale advertise in the Maritime Farmer.

Gold River Farm Poultry Yards.

Eggs for Hatching from

Houdans,
Silver Grey Dorkings,
R. C. Rhode Island Reds.

Our yards contain birds of show quality and high individual merit.

Eggs $1 00 per 15

W. J. M. MacLEOD,
"Gold River Farm."
LOCH LOMOND, WEST, N. S.

Gold River Farm.

CHESTER WHITES!

We have disposed of all our spring pigs and are now booking orders for July and August litters.

W. C. MacLEOD & SONS,
"Gold River Farm." Loch Lomond West
Richmond Co., N. S.

Pure Bred Shorthorns For Sale

I bull I year old I Heifer I year old 2 heifers I year. I cow 5 years old. 2 cows 9 years.

CHAS. B. TAIT.
Oxford, N. S.

Hatching Eggs Reduced.

White Rocks and S. C R. I. Reds, $1.50 per 15; fine stock. 1 Model Cyphers Incubator and 2 Brooders at bargain prices to clear

THE BURLEY POULTRY CO.
46 Princess St.,
St. John, N. B.

Strawberry Plants.

Raspberry, Blackberry and other small fruits. Large, thrifty, young plants. Best varieties, lowest prices. Satisfaction guaranteed, catalogue free.

E. L. Colpitts,
Box 10, - Petitcodiac, N B

267 Eggs in 365 Days

is the wonderful and unbroken record made by the Barred Plymouth Rock Hen,

Columbia

who was the foundation of the greatest Egg-producing and Prize-winning strain of Plymouth Rocks in the world to-day. Weight of females, 7 to 10 pounds; males from 8 to 11 pounds. Eggs for hatching for sale every month in the year and a few choice breeding birds on hand now, as we are practically done hatching this season.

For prices and photos apply to the Originator and Breeder of this wonderful strain of fowl. Satisfaction guaranteed.

P. A. PEARSON,
CALAIS, - - MAINE.

Eggs! Eggs! Eggs!
For Hatching.

From stock that won the big silver cup for "best exhibit at the Maritime Winter Fair" at Amherst. No better in Eastern Canada. Drop a line and get our mating list. Half price what you pay for Ontario and American eggs of the same quality. B. P. Rock, White and Brown Leghorn cockerels for sale.

SETH JONES,
Box 39, - - SUSSEX, N. B.

Shorthorns For Sale.

One pure bred bull 8 months old, one pure bred heifer 8 months old, one pure bred heifer 2½ years old1 one pure bred cow 4 years old. The first two are sired by Emma's Fashion. The last two are in calf by Emma's Fashion. Apply to

CHAS. B. TAIT,
Oxford, N. S.

Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.

Correspondence solicited.

WM. ERB, - Sussex, N. B.

Hatch 'Em Sure.

Barred Rocks, pullet or cockerel matings, S. C. B. Leghorns, White faced, black Spanish, Golden Crested Polish, $1.50 for 15 eggs.

J. B. DAGGETT,
Tracy's Mills, N. B.

English Potatoes for Sale!

Ideal Early and Discovery, late main crop potatoes, I dug 24 barrels from one barrel planted last year. No disease, while other varieties rotted. Grown three years in this country. Will keep until June. Apply to

C. H. Giles, "Brooklands" Fredericton, N. B
'Phone 2100. P. O. Box 119.

FOR SALE.

Ayrshire bull fit for service. Four Ayrshire bull calves, Ayrshire females any age. Thirty-five head to choose from Intending purchasers met at railway depot. Book orders for Chester White swine. Long distance phone in residence. J. FRANK ROACH,
Sussex, N. B

HURRY! HURRY!

And write us about how to get an incubator so it will pay for itself before you have to pay for it. Ask for our price list of eggs for hatching. 30 varieties.

Hartland Poultry Yards, Hartland, N.B

Spring Brook Farm Ayrshires.

This herd won 1st, 2nd, 3rd in the aged cow class at the Maritime Winter Fair Dairy Test Amherst, 1909. 2nd, 3rd, 4th in the three-year-olds, also 2nd, 3rd, 4th, in 2-year-olds. We have some bull calves to offer, also females all ages.

McIntyre Bros., Sussex, N. B.

Card of Thanks and that Kind of Thing.

Bloomfield Farm.

The undersigned beg to thank their friends for their very liberal patronage in the past which we trust has been mutually satisfactory and at the same time to say that we are still in the "running" at the old stand, with Ayrshires, Guernseys, Shropshires, etc. etc. Our specialties just now in stock for sale are 4 Ayrshire bulls, ranging in ages from 8 months to 18 months, purebred and registered, 1 Guernsey cow 6 years with calf at her foot, two days old. Heifer, this cow is a very superior one in every way and of the highest registry in the Dominion. Also 20 Shropshire lambs, pure bred season 1910 and fine ones. Likewise, 4 pure bred Coolie puppies 4 weeks old Would be pleased to hear from prospective buyers whose requests will have our prompt and best attention.

John McDonald & Son,
Bloomfield Farm, - Shubenacadie, N. S.

Milking Shorthorns!

I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

Bliss M. Fawcett,
Sackville, - - N. B.

FOR SALE.

The Stallion, Goldzilian, 2 years old this spring, color, chestnut, one white hind foot and white star. Bred from the best blood and trotting stock on both sides, perfect in conformation, heavy bone and muscle, and when 16 months old weighed 920 pounds and when fully matured will make a 1200 horse. Kind, good disposition and sound. For price, Breeding, etc, apply to the owner,

Colin C. Craig,
Meadow Brook Farm, Middleton P.E.I.

Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching from me, My Reds are imported from the United States and were winners at Sussex. Halifax, Fredericton and Amherst Winter Fair in 1909. Prices on application.

Thomas S. Kyle,
Sussex Corner, New Brunswick

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

GLENVIEW FARM.
Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone, Sussex, N B

For Sale.

Ayrshire Bull Calf "Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

JAMES BARRETT,
Hill Grove Farm,
Crouchville, St. John, N. B.

BEE-KEEPING PAYS

best under modern methods. Large profits from small investments. Any one can learn and get fair crops of honey first season. Books of instruction, Bees, Queens, hives, sections and comb foundation at lowest prices. Price list free. E. L. COLPITTS, Box 10, Petitcodiac, N. B.

Homestead Farm

Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09. No. 1 Stallion.—Dam, Soubrette, Imp., by Laborl, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

LOGAN BROTHERS, - - Amherst Point, N. S

BELLEVUE STOCK FARM.
Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Cobequid Farm Holsteins For Sale.

Two bulls fit for service from record of merit dams. Three heifers two heifers two years old, and two heifers one year old, bred to Hellon Dekol's Prince. Three young cows, bred to Sir Rooker Posch Artis. Several bull calves from three to six months old. Come and see them.

SAMUEL DICKIE - - - Central Onslow, N. S.

SHORTHORN BULLS FOR SALE.

I have, for immediate sale, eight very nice Durham Bulls, from two to fifteen months old. They were sired by a bull imported from Hon. John Dryden & Sons and are out of excellent cows. Write us your needs. We can supply them and will give you good satisfaction

C. C. H. EATON, - Canard, Kings Co., N. S.

"Brooklands'" Holsteins for Sale!

We are now offering one Holstein Heifer, 6 months old, and one Holstein Bull, 6 months old, for sale. These Calves are "not akin." $80.00 will take the pair. For full information write

C. H. GILES, - "Brooklands," - Fredericton, N. B.
'Phone 2100. - - - P. O. Box 119.

——WE ARE OFFERING——

EXTREMELY LOW PRICES

——ON SEVERAL——

PURE BRED AYRSHIRES

——INCLUDING——

Some Aged Cows

2 Year Old Heifers, coming 3 in August, (in calf, due Aug. and Sept.)
2 Yearling Heifers. 2 Fall Heifers. 2 Fall Bull Calves.
Send for descriptive list.

Hampton Stock Farm Co., Hampton, N. B.

MAPLE FOREST STOCK FARM.
YORKSHIRE SWINE.

ADDRESS:

S. J. GOODLIFFE, - Sussex, N. B.

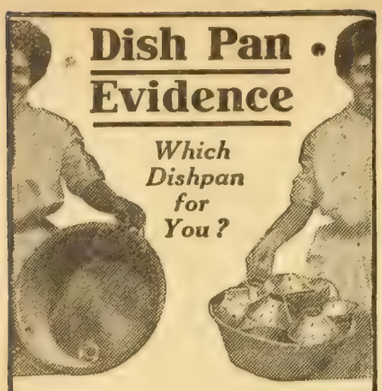
COVEN HOVEN STOCK FARM
St. Andrews, N. B.

The hadsome Clydesdale Stallion Sir Hugh MacAdam (9408) rising 3 years. Choice young stock in both sexes of those wonderful utility dairy breeds; the Dutch Belted and French Canadian Cattle. In Tamworth swine we have several excellent young sows for sale. Prices most reasonable. Write or visit us.

J. R. OASTLER, Supt.

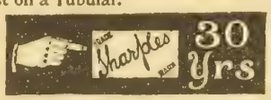
Dish Pan Evidence

Which Dishpan for You?



The practically empty pan contains the only piece used inside Sharples Dairy Tubular Cream Separator bowls. It is smooth, tiny, instantly removable. The full pan contains the disks from a single common cream separator — one of thousands of the common sort that are discarded for Tubulars every year.

The simple, sanitary Sharples Dairy Tubular is the only modern, easy-to-clean cream separator—has twice the skimming force — lasts a lifetime. The dishpans show one reason why every woman should insist on a Tubular.



The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Tubulars probably replace more common separators every year than any one maker of such machines sells. Write for catalog No. 194

THE SHARPLES SEPARATOR CO.
Toronto, Ont., Winnipeg, Man.

P. E. I. Notes and Conditions.

Editor Maritime Farmer:—

After passing through one of the finest and most pleasant winters ever seen on the Island, we are now enjoying beautiful, spring weather fully two weeks earlier than usual. Our summer Steamers, which kept up communication with the outside world up to New Years, began their work again this spring the first day of April; and we were served fairly well with the two icebreakers, if indeed, they can be called such. other two months. After continuous appeals from the people of the west end of the Island to the powers at Ottawa to send one of the winters steamers to break through a bridge of ice at the mouth of Summerside harbor, thus enabling the summer steamer to ply at once, she, at last, was sent and after puffing and blowing and running through some of the thinner ice turned and steamed back to Charlottetown.

The summer steamer, "Empress," supposing the only barrier from Summerside to Point de Bute now broken, came up the Straits and cut her way into Summerside harbor, a fete which the new powerful Government icebreaker refused to do and ever since has made regular trips. It is quite evident that the Government would like to freeze up the western route all summer if possible.

The mild winter has been favorable for all kinds of stock and as a result, dairy cows are in great demand and at the auction sales are bringing good prices. Several of our co-operative creameries were kept running all winter and the prospect now is for an increased supply of milk during the coming summer. Those who have kept and fattened a good number of hogs the past winter have made good money. Pork at 11 cents per lb. and potatoes at 20c or less, and oats little better than 40c. should be well marketed in feeding them to hogs. Many farmers have had poor luck with their spring litters and young pigs are very scarce and high in price. The high price of the past season has induced farmers to keep more young pigs for this fall's feeding, but we hardly expect to see pork so high this fall.

Beef is also worth having this spring. 5½c to 6c live weight fed till June is the usual price to those who sold some months ago. Good horses are also in demand at high prices, so that the farmer can hardly make a mistake in feeding any kind of live stock for market. The poultry side line of farming is also receiving great attention just now. Eggs are worth more than double what they were ten years ago and we can get 14 cents a pound for dressed chicken as fast as we can get them fit to market. It is almost incredible to believe the great weight which some of the heavy breeds of spring chickens can be made to weigh in the fall. A chicken dressing eight pounds is not a rare thing now and some have even reached ten; if they keep on growing it loovs as though the duck and the old goose would have to step down and out, but still a good flock of geese in the fall are an ornament to any barnyard.

The farmers who got their potatoes off through the winter at 30c. per bus. have apparently struck it better than those who bought them at that price. Great quantities of potatoes are in the country everywhere and at the present they are not wanted at any price and the prospects are not at all encouraging; some think they may be wanted later on in June, but farmers who have hogs or cattle to feed them to have probably the best market they will have this spring. Oats have also dropped in price since the winter. First class recleaned seed oats are worth 45 to 48 cents, some who sold early got 50 cents.. Farmers were paid $1.50 to $1.60 by the merchants for good seed wheat and many are selling all out at this price and buying flour. We are now busy sowing our fields again. The new meadows look most promising and after such heavy warm rains we are almost sure of a full hay crop this summer. OBSERVER.

STOCK NOTES.

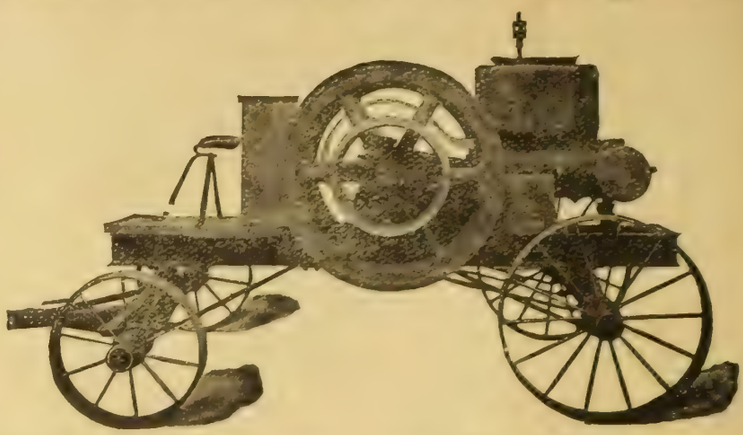
Following is a list of the cattle, prices and purchasers at the Glenhurst dispersion sale recently advertised in these columns by James Berning, Williamston, Ont.

FEMALES—COWS.

Silver Lass of Glenhurst, 25020, Ontario Agricultural College...$325
Her bull calf, D. Leitch & Sons, Cornwall, Ont. 25
Flo 2nd of Glenhurst, 29869, W. G. Tretheway, Toronto, Ont... 300
Floss 5th of Glenhurst, 29878, Ont. Agricultural College..... 375
Her bull calf, D. Leitch & Sons... 25
Kilbowie 2nd of Glenhurst, 25025, P. Ryan, Brewester, N.Y..... 375
Belle 2nd of Glenhurst, 25023, J. P. Graves, Spokane, Wash., U. S. 200
Ada of Glenhurst, 9945, Wm. Hunter, Maxville, Ont..... 75
Floss 3rd of Glenhurst, 16313, Hector Gordon, Howick, Que... 300
Her bull calf, James Elliott, Ormstown, Que 25
Rose 4th of Glenhurst, 29854, W. G. Tretheway 135
May 3rd of Glenhurst, 29851, Ed. Maxwell, St. Anne, Ont..... 130
Floss of Glenhurst, 9947, Wm. Hunter 150
Her heifer calf, R. M. Howden, St. Louis Station, Que..... 75

Calves Raise Them Without Milk
Booklet Free
A. A. Archibald & Co., Truro, N. S

THE GILSON
"Goes Like Sixty."
Gas and Gasoline Engine.



All Sizes Stationary and Portable.
Has a World Wide Reputation as THE STANDARD ENGINE.

THE GILSON ENGINE is the highest development of gas engine construction. It is the result of tireless INVENTIVE INGENUITY, RIPE EXPERIENCE, and a fixed purpose to produce the BEST THAT IS MADE.

THE GILSON ENGINE incorporates the best features of all foreign and domestic engines, and besides possesses distinguishing features not found in others

THE GILSON ENGINE is noted for Reliability, Power and Durability. It will last indefinitely with ordinary care and be a constant source of satisfaction.

THE GILSON ENGINE is most ATTRACTIVE in APPEARANCE, EASY to OPERATE and VERY ECONOMICAL

Our reputation for producing the highest grade engines, for fair dealing and liberal, courteous treatment and Low Prices, is one of our most valued assets.

Ask for our large Catalogue; get our prices; compare Engines and Prices and you will decide in favor of the Gilson Engine, because it is the BEST and CHEAPEST as well

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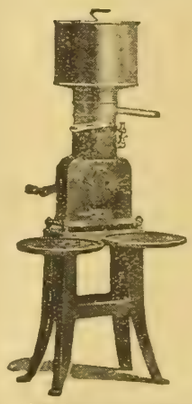

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Primrose 3rd of Glenhurst, 29900 Ed. Maxwell 200
Ruth of Glenhurst, 29883, W. G. Trethewey 170
Her bull calf, D. Leitch & Sons... 20
Rose 3rd of Glenhurst, 29853, Ont Agricultural College 130
Her bull calf, J. McBride, Northfield, Ont. 25
Bud 2nd of Glenhurst, 21904, Ont. Agricultural College 400
Her heifer calf, D. Leitch & Sons 75
Primrose 4th of Glenhurst, 29871 Wm. Hunter 80
Ruth 2nd of Glenhurst, 29889, W. G. Trethewey, ... 140
Her bull calf, D. Leitch & Sons 30
Pearl, 11477, Wm. Hunter..... 90
Her heifer calf, D. M. Watt, St. Louis Stn., Que. 50
Brownie of Glenhurst, 29866, W. G. Trethewey, ... 125
Primrose 2nd of Glenhurst, 21917 Ed. Maxwell 200
Her bull calf, D. Leitch & Sons 20
White Floss of Glenhurst, 29888, 3 years old, P. Ryan..... 590
Her heifer calf, D. Leitch & Sons 95
Glenhurst Cherry, 29891, Ont. Agricultural College 400
Her bull calf, James Donaldson, Dewittville, Que..... 45
Floss 6th of Glenhurst, 29876, W. G. Trethewey, ...@..... 380
Glenhurst Alice, 29895, D. T. Ness, Howick, Que. 100
Her heifer calf, James Symons, St. Louis Stn. 35
Glenhurst Pippin, 29856, 3 years, P. Ryan 225
Her heifer calf, Jas. Symons..... 55

TWO YEAR OLD HEIFERS.

Glenhurst Violet, 29885, Wm. Hunter 115
Glenhurst Blossom, 29857, Wm. Hunter 110
Glenhurst Flossie, 29857, A. W. McIntyre, Newington, Ont..... 275
Glenhurst Kilbowie Maid, 29907, A. W. McIntyre, Newington,... 350
Glenhurst Cinderella, 29901, Wm. Hunter 130
White Ada of Glenhurst, 29859, A. W. McIntyre 425
Madeline, 29881, Wm. Hunter..... 100
Adeline of Glenhurst, 2975, Wm. Hunter 175
Glenhurst Nettie, 29896, Alex. Hume, ... 75
Glenhurst Bessie, 29899, D. Leitch & Sons 75
Glenhurst Lily, 29904, Alex. Hume 75
Queen Floss of Glenhurst, 29887, D. M. Watt 180
Myrtle of Glenhurst, 29868, D. T. Ness 80
White Leda of Glenhurst, 29893, D. Leitch & Sons 100
White Ruth of Glenhurst, 29884, Wm. Hunter 120
Blue Bell of Glenhurst, 29865, Wm. Hunter 110

HEIFERS OF 1909.

Glenhurst Pansey, 29870, Wm. Hunter 95
White Polly of Glenhurst, 29882, Wm. Hunter 95
White Molly of Glenhurst, 29892, A. W. McIntyre, ... 200
Glenhurst Jean, 29872, Wm. Hunter 145
Brown Beauty of Glenhurst, 29897 D. Leitch & Son..... 50
Glenhurst Zilla, 29858, D. T. Ness, ... 75
White Rose of Glenhurst, 29855, A. W. McIntyre, ... 100
Brownie 2nd of Glenhurst, 29867, J. McBride, Northfield, Ont..... 30
Glenhurst Queen Floss, 29886, A. W. McIntyre 200
Floss Gem of Glenhurst, 29877, Wm. Hunter 150

BULLS—TWO YEARS.

Drongan Mains Guarantee (imp) (7316), 26337, W. G. Trethewey 375

BULLS OF 1909.

Knockdown 3rd of Glenhurst, 29898, Jas. Irving, Ventnor, Ont 125
Glenhurst Guarantee, 29905, G. H. McGilvery, Williamston,
Floss Guarantee of Glenhurst, 29879, Wm. Paul, Peterboro, Ont. 110
Glenhurst Mains, 29903, A Kennedy & Sons, Vernon, Ont..... 90
Bud's Guarantee of Glenhurst, 29861, Ont. Agricultural College 100
Rose's Guarantee of Glenhurst, 29880, J. A. Major, North Lancaster 100
Drongan Prince of Glenhurst, 26337, W. H. Laturelle, South Gower, Ont. 95
Ada's Guarantee of Glenhurst, 29860, A. F. Dunn, Bainsville, Ont. 45
White Drongan of Glenhurst, 29874, N. Copeland, Cornwall, Ont. 50
May's Guarantee of Glenhurst, 29852, J. F. Annibel, Moulinette, Ont. 70
Kilbowie's Guarantee of Glenhurst 29908, P. Ryan 75
King Drongan of Glenhurst, 29902 John H. Deeks, Dunbar, Ont.... 50
Young calf, D. Leitch & Sons,... 20

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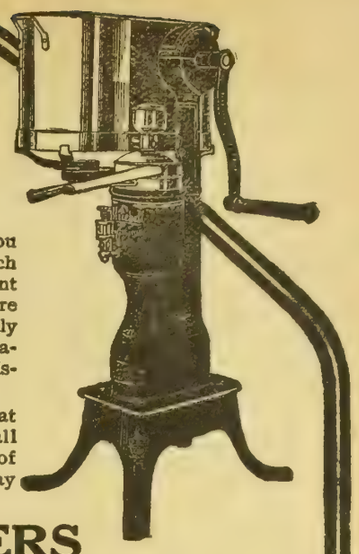
From Every Pail of Milk With Least Labor



YOU are not making all the money you could make out of the cows you keep unless you use an I H C Cream Harvester. You know how much butter fat you lose if you skim the old-fashioned way—from 20 per cent to 40 per cent—not to mention the time and labor wasted. Such methods are out of the question for the farmer with the 1910 spirit of progress. It is equally poor business to use a cheap, out-of-date or makeshift separator. Such machines are hard to clean, hard to turn, last but a short time, never give satisfaction, are never worth the price.

The money-making dairyman is the man who invests in a separator that will skim to a trace; that is simple enough to be kept perfectly sweet at all times, so he gets quality cream; one that turns easily—so that any member of the family may skim without effort; one that will do the work day in and day out, year after year. For such a separator choose one of the

I H C CREAM HARVESTERS

Be sure to investigate these machines before you consider buying any other make at any price. That is all we ask. You don't need to be an expert to see that the design and construction of an I H C is more simple and practical than any other. The only one with dust and milk-proof gearing; most perfect straining device insuring pure cream and skim milk; frame entirely protected from wear by bronze bushings at all points; has largest shafts, bushings and bearings; simplest, surest, most economical oiling arrangement; flexible top bearing prevents vibration and keeps bowl steadied, no matter if power is unevenly applied; many other features equally superior to all other separators.

I H C Cream Harvesters are made in two styles—the Bluebell, gear drive—the Dairymaid, chain drive. Four sizes in each style. No matter how few or how many cows you keep, we can meet your requirements. See the International local agent; or write International Harvester Company of America at nearest branch house for catalogue and full information.

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When you buy Roofing Look for the RUBEROID MAN

Beware Imitations.

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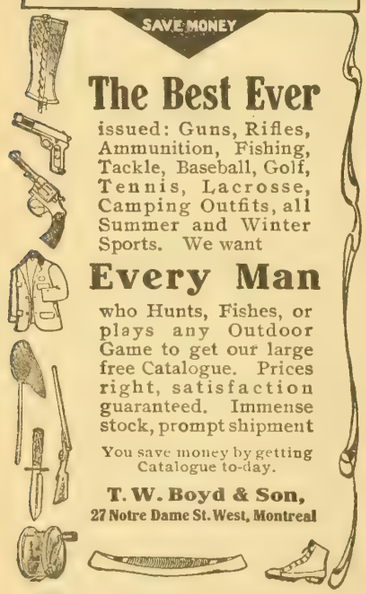

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INVENTIONS Thoroughly protected by patent in all countries. EGERTON R CASE, Registered U. S. Patent Attorney, TEMPLE BUILDING, TORONTO Booklet on patents and drawing sheet on request.

P. H. Nugent, of St. Martin's, N. B., recently sold a pair of bay standard bred horses, full brothers, to Rev. Father Richard, of Kings County, for $800.00. These horses are five and six years old respectively, and weigh in the aggregate 2,357 pounds. They were first prize winners at St. John, N. B., Exhibition, last year.

Argentine and Australia Compete for American Meat Market.—The high scale of prices now prevailing for meats in the American market has had the curious effect of causing Australia and Argentine to compete for the business of supplying some of the meats used in New York. One shipment of 500 cars of frozen mutton were recently received in New Yorv from Australia, and these proved so attractive that two additional orders were at once placed, one for 1,500 and the other for 2,000 carcasses. Five New York firms are now, according to The Breeders' Gazette, engaged in selling Australian mutton in that city. The mutton sells at 2c. per lb. less than the native article. Representatives of the Argentine frozen meat industry have also been in New York, and have succeeded in placing a number of trial orders for meat from that country.

The Demand for Ayrshires.—Those who predicted a future boom in Ayrshire milk stock must be agreeably surprised at the early fulfillment of their prophecies, as already the demand has set in, and, it is said, to such an extent as to have outrun supplies. American and Canadian buyers, through their local agents, have been very active during the last few weeks, and have visited most of the herds where deep-milking pedigreed Ayrshires were likely to be got. These buyers are all after the one kind, viz., animals of heavy milking strains, and naturally their attention has been almost confined to the herds where milk records are kept. They are much more particular in their selection now than in the past, and, we understand have not been able to secure as many as they wanted. Breeders now recognize the value of retaining sufficient of the right blood so as not to deplete their herds, consequently the number of animals which can be spared for export just at present is limited. We hear of some high prices having been offered and refused, and it looks as if the £100 Ayrshire was likely to be much more common in the future than in the past. We know of one breeder who refused to break £100 for a bull calf; but as this animal has a wonderful milk-record pedigree, together with show points, it is to be hoped that he may be kept in Scotland to help to further advance the Ayrshire breed. Now that breeders fully recognize the value of milk records, and are preparing to supply the demand from overseas for the right sorts, we may expect foreign and colonial visitors to buy more fully as they gain confidence that their purchases will give them the desired result in filling the pail, and that the small-teated, tight-vesseled Ayrshire is a type of the past. Without doubt, the Ayrshire cow is the best all-round dairy breed in the world, and is the most encouraging to the enthusiasts who have held this opinion to find other countries recognizing their value. Every care should now be taken to see that nothing but good animals are exported, so as not to repeat the errors of the past, and when once customers can rely on getting cows to uroduce 900 to 1200 gallons a year Ayrshire breeders may expect to come nearer the high prices now paid for Shorthorns.—Scottish Farmer.

Vigorous Manhood.

Two "Health Belt Men." One 50 Years Old, the Other 30. Can You Pick Out the Younger?

I can show you how to restore your youth and how to keep it. A "Health Belt Man" CANNOT grow old; he must be young forever. Years count for nothing in this life, so long as you have great vitality. Weakness, Nervousness, Unmanliness are conditions to be laughed at by the intelligent user of my great appliance, for it gives, in abundance, all that vim, vigor and nerve force which the weakened system craves—Worn every night and all night for two or three months, it sends a great, warm, glowing volume of electricity into your body through the nerve centres at small of back; from the first hour's use you experience a decided benefit; there is a great, mysterious force which gets right to work. No drugs to be taken; no conditions imposed except that dissipation must cease. Help nature that much; the Belt will do the rest. It takes the weakness and kink out of your back; it drives rheumatic pains away from all parts of your body, you will feel and look young and strong again; woman and man noticing your physical change will be more attracted toward you on account of your new vitality and life; in two months you can experience the full vigor of perfect manhood, or you need not pay.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it doesn't do the work.

Let Me send You These Two Books FREE.

They fully describe my Health Belt and contain much valuable information. One is called "Health in Nature," and deals with various ailments common to both men and women, such as rheumatism, kidney, liver, stomach, bladder, disorders, etc. The other "Strength," is a private treatise for men only. Both sent upon application, free, sealed, by mail.

If in or near this city, take the time to drop in at my office that you may see, examine and try the Belt. No charge for advice, either at my office or by mail. If you cannot call, fill in the coupon and get the free booklets by return mail. They are better than a fortune for any one who needs new vigor.

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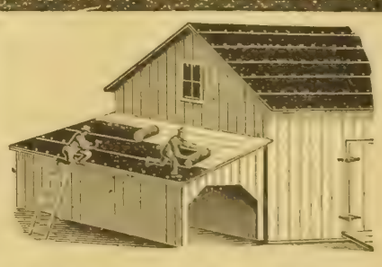

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Mr. Andrews praises Dr. Morse's Indian Root Pills.

Mr. George Andrews of Halifax, N.S., writes:

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That was indeed a lucky day for me, for I was so impressed with the statements made that I determined to give them a fair trial.

They have regulated my stomach and bowels. I am cured of constipation, and I claim they have no equal as a medicine."

For over half a century Dr. Morse's Indian Root Pills have been curing constipation and clogged, inactive kidneys, with all the ailments which result from them. They cleanse the whole system and purify the blood. Sold everywhere at 25c. a box. 2

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The richness of butter depends on the pedigree of your cows.

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The "FAVORITE" CHURN means a deliciously smooth butter that will bring the "top" price. And the "FAVORITE" will get every particle of butter fat out of the cream. Hand lever and foot tread—8 sizes.

"Puritan" Washer washes a tubful of clothes in five minutes.

Write us if your dealer does not handle the "FAVORITE" CHURN and "PURITAN" WASHING MACHINE. 71

DAVID MAXWELL & SONS. - ST. MARY'S, ONT.

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Cake Icings

If you had trouble with prepared Cake Icing, it was not Cowan's.

Even a child can ice a cake perfectly, in three minutes, with Cowan's Icing. Eight delicious flavors. Sold everywhere.

The Cowan Co. Limited, Toronto. 8S

MEN'S FASHION HINT.

Summer homespuns are going to be much worn by both ladies and gentlemen this year—at least this is the view of one of the Hewson Woolen Mill travelers who had an order book well filled with Spring business the other day.

R. S. Starr's Baron Majestic, the two year old pure-bred Clydesdale colt, son of Baron Primrose, which won first in his class at Amherst Horse Show recently, has been sold to P. L. Morse, of Berwick, N. S., for a handsome figure.

Chilled Meats From Australia.—A second consignment of chilled beef from Australia arrived in England last month. The vessel was on the way 67 days and still the meat was landed in perfect condition. It is believed this marks the beginning of a trade which may soon rival in importance the chilled meat industry of Argentine.

Live Stock Prices in Michigan.—A correspondent of Hord's Dairyman reports that at recent auction sales in Michigan a number of mares have gone up over $300, while a mare in foal fetched $335. Yearling colts are bringing $150. One Holstein cow sold as high as $95, and others $65 to $80, and a brood sow with seven young pigs sold at $60.

Donation to Breeding Bureau.—B. E. Chapman, of Chicago, has donated to the Canadian Breeding Bureau the ten-year-old stallion Robert G. Lansing, by Lamplighter—Lady Ballard, and the horse has been shipped to River Glade, New Brunswick, for the purpose of improving the breed of horses in that particular locality. He was a fast horse that went wrong in his ankles and tendons as a two-year-old after he had run a few good races at Louisville, St. Louis and other western tracks. He was a handsome inhividual, with a rich brown coat, stood sixteen hands two inches high and weighed 1,133 pounds when in training.

Elm Shade Berkshires.—J. R. Semple, writes:—The Elm Shade Berkshires have wintered in splendid condition and are giving good strong litters. A young sow purchased in Ontario last summer has just farrowed nine strong, evenly marked pigs, first litter.

Particular attention has been paid to the exercising of the brood sows during the winter, turning them out in the barn yard and feeding roots and whole grain on the ground, in consequence the pigs arrive strong and active and ready to fight their own battles.

The demand for breeding stock is lively and a very encouraging feature is that satisfied customers are repeating their orders and many new names are being added to the list.

The Prince Edward Island Live Stock Sale which was held at the Stock Farm, Charlottetown, on April 29th, was an unqualified success. Stock raisers and horsemen were present from all parts of the Island. Benjamin Carter, the Charlottetown city auctioneer, conducted the sale.

Among the sales were:—

One pure bred Clydesdale mare, sold to Major Allen, Covehead for $340.

One pure bred Clydesdale mare, to Leonard Wood, Mt. Albion, for $450.

Another to Amos Rodd, North Milton, for $210.

Clydesdale filly to Horace McKinnon for $115.

One span of drivers sold for $350 to Hammond Kelly, Southport.

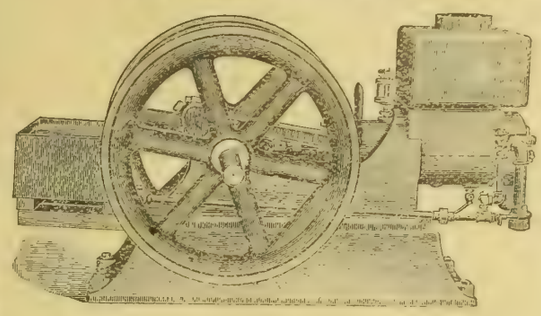
The farm horses sold at prices ranging from $145 to $180.

Pure bred Shorthorn cattle sold as follows: To Picton C. Brown, one for $80; another to John Andrews, East Royalty, $57; one to Bertram Younker, $81; one to George Wheatley, $73. A large number of young cattle sold at good average prices.

WE WANT AGENTS RIGHT AWAY!

In every section in the Maritime Provinces where a gasoline Stationary engine can be sold. The one we have to offer, which appeals most to farmers, is the

"Waterloo Boy"



Frost Proof Stationery Engine.

These Waterloo Engines are well and substantially constructed of the best material, by skilled mechanics, and are so durable that the makers have no hesitancy in extending to users their five years' guarantee. Engines are built on the interchangeable plan, all parts being made from jigs and templates, each and every part of the same kind being perfect duplicates, so in future years repairs that may be required can readily be placed without delay.

All the working parts are exposed to view and the duty of each part is readily understood by the user of the engine. The construction of these engines is such that they combine great strength and durability, yet it has been the manufacturers constant study to do away with all extra parts and simplify the construction as much as possible.

If you are looking for a good, reliable and up-to-date gasoline engine to handle—one which sells itself and leaves you a fair margin—write to-day for particulars.

Empire Cream Separator Co.,

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To the Secretary of the

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For the First Issue of

The Complete Prize List

Containing all desired information regarding Cattle, Horses, Poultry, Agricultural, Horticultural, Educational and Woman's Work Competitions.

H. J. P. GOOD, Mgr. H. A. PORTER, Sec't'y.

A. E. McLean, of Lot 16, P. E. I., has secured the famous Holstein bull, Artis John, from M. J. Leard, Kelvin. This splendid animal was imported last year and has never been beaten in a show ring. He weighs 2100 lbs. and was the grand champion of the Island last fall at the Provincial Exhibition, Charlottetown. He comes from the greatest milk producing family of Holsteins in Canada—and is the highest priced bull in the provinces today. Mr. McLean and the farmers in his neighborhood are to be congratulated on having secured this splendid animal.—Pioneer.

The PUBLISHER'S DESK.

Bigger Dairy Profits.—Knowing that our readers are always eager to learn how they may increase their milk profits these columns are always open to give them the best possible advice. We have just received a large Catalogue from W. A. Drummond & Co., of 185 King St. East, Toronto, which is full of suggestions for dairy farmers, large and small. The firm in question is one of the largest manufacturers of dairy supplies in Canada and judging from their catalogue we should say that quality and low prices characterize all the goods they sell. To mention only a few of their popular lines, Bterilac Milk Pail, Purity Cooler, Babcock Milk Tester, Automatic Scales, Milk Cans, Milk Bottles and that wonderful machine, The Root Sanitary Cooler—these are only a few of hundreds of useful and convenient articles listed in the large catalogue and we have no hesitation in stating that the majority of this firm's goods will make money for any man who owns one cow or more. In view of the increasing price of feed and the vigilence which is being exercised by the Dominion and Municipal authorities with reference to the absolute purity and sweetness of all milk supplies, our readers should certainly instal some of these profit-making implements. W. A. Drummond & Co. state that they will send a catalogue to any of our readers free, and we certainly advise everyone to take advantage of this offer, mentioning at the same time any particular thing they are in need of.

A Pioneer in the Roofing Business.—One of the pioneers in the prepared roofing business is the Brantford Roofing Company, Limited, and to this company must be given a large share of the credit for the success of the prepared roofing industry in Canada. The high quality of this company's products—the great satisfaction they have given—has created a feeling of public confidence in the merits of prepared roofing, and has won an enormous trade for Brantford Roofing in particular. The Brantford Roofing Company devote their entire energies to the manufacture of Asphalt Roofings exclusively, and as they have had many years experience in the roofing business, this speaks volumes for their belief in the superiority of Asphalt as a roofing material. This company state that the asphalt they use is an exceptionally high-grade of asphalt, which has been refined until it has become 99 per cent. pure. They also have their long-fibred pure wool felt made according to their own rigid specifications, as they say the ordinary commercial felt is not nearly good enough for the purpose. In addition to a thorough asphalt saturation the felt is given a heavy coating of asphalt into which is firmly embedded crushed feldspar asbestos fibre, mica and other materials noted for their fire-proofing and water-proofing qualities. At their immense factory at Brantford, Canada, the Brantford Roofing Company make nine different styles of asphalt roofing, and two thicknesses of saturated felt for sheathing or exterior surfacing. This line of surfaced goods can be used in any climate, and on pitch or flat roofs, or on the sides of buildings, and has been very successful in resisting the action of weather, acids and gaseous vapors, as well as a complete protection against flying firebrands and burning cinders. Like other progressive manufacturers, the Brantford Roofing Company are liberal advertisers, and their advertisements, many of which appear in this publication, are always interesting and instructive.

How to Select a Harvesting Machine.—This is a subject which should be of great interest at this time of the year. The long winter months are past. The season of activity is upon us. From now on until harvest time you will be busier every day. Now is the time to look over your equipment, find out what you will need, and then select the machine that in your judgment will be best adapted for your work. It is a subject that calls for careful consideration. If you do not choose wisely—you may find that instead of being prepared to make every moment cient, economical machine you have purchased "continual trouble." Every delay due to a breakdown, every moment lost by a bungling count at harvest time with an effimachine at harvest time means a reduction of your profits. It is the purpose of this article to call attention to a few points that you should consider carefully before buying any machine. In the fist place—you should consider carefully the reputation of the manufacturer and the record of the machine in the McCormick machines of the I. H. C. field. For example—the Deering and line are known quantities. The I. H. C. trade mark in the first place is a guarantee of quality—a seal of excellence. I. H. C. machines are known the world over for their efficiency. Deering and McCormick harvesting machines have proved their labor-saving, profit-producing qualities to millions of farmers in all parts of the world. They have a particularly good record for service on Canadian farms. They seem to meet the Canadian farmers requirements as no other machines do. They get all the grain no matter whether it is tangled, standing or down—in the quickest possible time. They have a strength and a wide ground. The Deering line comprises range of adjustment that adapts them to all conditions of grain and harvesting machines, binder twine, mowers, tedders, hay rakes and side delivery rakes, hay loaders, disk, shoe and hoe drills, cultivators, seeders, smoothing, spring tooth and disk harrows, land rollers, scufflers, Deering agents also handle gasoline engines, cream separators hay presses, wagons, sleighs and manure spreaders. The McCormick line is equally complete. This is another important point. For the wide variety gives you a sure opportunity of getting the machine best adapted for your individual use. The big demand for these machines permits their manufacture in such large quantities that the manufacturing cost is reduced to the lowest possible point—without sacrificing quality. In buying a machine bearing the I. H. C. trade mark, you are sure of getting a machine having the latest practical improvements. Every year finds the experts responsible for the design of Deering and McCormick harvesting machines in the field making notes and watching to see where any improvement could be made to increase their efficiency. Another question that should engage your attention now is the selection of binder twine. In choosing twine bearing the I. H. C. trade mark in sisal, standard Manilla, or pure Manilla brands, you are certain of satisfaction. The International Harvester Company has more at stake than selling twine. It is vitally interested in the successful operation of over a million binders and knows that no binder can work successfully with poor twine, and has therefore given the subject the most careful consideration. If you have not as yet made a selection—do not delay any longer. See the local I. H. C. dealer, or write direct to the nearest branch house of the International Harvester Company of America, at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

Peerless Lawn Fence

Is Strong and Attractive. All the wires are uniformly crimped, large gauge, steel spring wire, heavily galvanized and coated with white enamel paint. Never sags, never rusts. Improve your property with a Peerless Fence. Cheap as wood and more handsome and durable. Also full line of farm and poultry fence and gates. Write for information.

THE BANWELL HOXIE WIRE FENCE CO., Ltd.
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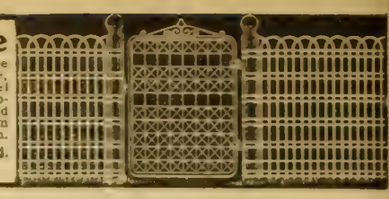

"Pedigreed" Cream Separators.—There is no questioning the value of a good cream separator. And there is no doubt but that a poor cream separator is just as poor economy as having none at all. In buying your separator, it pays to use the same business judgment you practice in buying live stock. In other words—buy a "pedigreed" cream separator—one with a record back of it—one made by a reliable manufacturer. You know that a "scrub" cow eats just as much feed and requires just as much care as a pedigreed cow. Yet the scrub cow doesn't pay half as much profit. It's the same way with cream separators. A "scrub" cream separator doesn't pay half as much profit—requires more attention than a "pedigreed" separator. So it pays to be careful in the buying. It pays to look who is behind the separator you buy. For that is your only real guide to making the right choice The further importance of choosing the right cream separator, is emphasized by the fact that the advantages of careful breeding and feeding may be spoiled by a poor separator. So, in reality, a cream separator is even more important than feed or breed. It isn't enough to get the biggest possible milk production. You must also be sure of getting the limit of butter-fat. Your separator must, first of all, skim to a trace. Second, it must be easy to clean. Third, it must be easy to turn, and fourth, it must be simple and strong in construction. Most separators claim all of these advantages. So we advise you to look to the manufacturer. Investigate thoroughly before you decide. In your investigations you will come across the I. H. C. line of Cream Harvesters backed by the International Harvester Company's reputation for quality and their immense buying, manufacturing and selling power. The I. H. C. line of Cream Harvesters merits your close investigation, for they possess many real advantages, besides remarkably close skimming, very easy cleaning, light running and simplicity and strength in construction. You will find that they are the only cream separators with dust-proof and milk-proof bearings. You will find in them a straining device that is perfection in itself—insuring quality cream and quality skim-milk always. You will note that the frame of an I. H. C. is entirely protected from wear, by bronze bushings and that the I. H. C. has the largest shafts, bushings and bearings, that they have the most positive oiling systems and that the flexible top bearing prevents vibration and keeps the bowl steady, no matter how unevenly the power is applied. And you can choose the size and style to just meet your needs, out of this excellent line. They are made in two styles—the Bluebell, gear drive—the Dairymaid, chain drive—and four sizes in each style. We suggest that you call on your local International dealer and get all the information you want, on just the cream harvester you need. If you prefer, write direct to the International Harvester Company of America, Chicago, U. S. A., for catalogs and any special information you wish.

A Fasinating Drama.—The peopling of the great Canadian West is a fascinating drama, whether we view it from the large or the small end of the telescope, i. e., from the point of the great railroad builder throwing a steel spine across the continent, or from the point of one little family unit finding its tree farm under the aegis of this transportation line. The line of the Grand Trunk Pacific across Canada is essentially the belt of homes. Who is it that answers the call of the wheat? The young, the brave, the hopeful, the helpful, says Miss Agnes Dean, in the March issue of the "Magazine of Commerce." The writing tools to write the drama are the strong arms of men and of faith possessed women. It is a good play for the world to watch. The first scene is enacted on the prairie farm where the virgin sod is turned under to a crop of wheat for the first time since creation's dawn. The second scene is the grain elevator, against the setting sun, and the waiting wheat train of Grand Trunk Cars. Our drama closes with the loaf of bread clutched in the eager grasp of the little child in some crowded city of the old world.—"Manchester (Eng.) City wews", March 19, 1910.

Greater Prince Rupert.—Mail advices to the Traffic Department of the Grand Trunk Pacific this week, show that there is great activity, both in new building operations and in the advance in real estate in Prince Rupert, which in another two months will complete its first year of existence. It is nothing unusual for a million feet of lumber to be delivered at Prince Rupert in a single week and it melts away as fast as men and teams can handle it. A number of lease-holders are starting to build wharves, and the new concrete wharf of the British Columbia Government will also be under way at once. The Grand Trunk Pacific is planning further large additions to its already extensive wharves. The British Columbia legislature late in the season, which has just closed, gave Prince Rupert a charter as a town, with special privileges and rights as to the control of municipal water and lighting privileges not enjoyed by other cities in British Columbia. The population of Prince Rupert believe that the inauguration of their own municipal government instead of being administered by commissioners, will mean a further stimulus to the already phenomenal, if not magical growth of the town.

THE MARITIME FARMER
AND
CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

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Directions For Making Spray Mixtures.

By Department of Horticulture.

SPRAY mixtures for the control of insects and fungi attacking plants may be divided into three principal classes: insecticides, fungicides and combined insecticides and fungicides. Insecticides are those sprays which are employed to control insects only; just as fungicides are for the control of fungous attacks. The two sprays are frequently combined in the same mixture to combat both insects and fungi.

INSECTICIDES. — Insecticides are grouped into two classes, according to the method employed in combating the insect. First, for those insects which chew their food and can be killed by a poison which is taken into the stomach, a poison such as arsenate of lead or Paris green, is used. Second, for those insects which suck their food from the plant a spray is used which will corrode their bodies or close the breathing pores. These are known as contact sprays.

INSECTICIDES FOR CHEWING INSECTS.—Among the principal chewing insects with which the horticulturist has to deal are the following: codling moth, canker worm, curculio, leaf skeletonizer, tent caterpillar, fall web worm, grasshopper, Colorado potato beetle; and for these insects arsenate of lead or Paris green may be used. While hellebore is preferable for the following insects when the fruits are nearly ripe; currant-worms, cabbage worms, caterpillars, and other insects attacking vegetables and small fruits. The use of arsenate of lead early in the season is recommended for all these insects, and white hellebore is used just before the ripening of the fruit.

ARSENATE OF LEAD.

Commercial—2	pounds arsenate of lead
50	gallons of water
	or
Homemade—10	ounces arsenate of soda
24	ounces acetate of lead
50	gallons of water

The commercial arsenate of lead is prepared for spraying simply by mixing it with water to make a smooth paste and adding this to the wayer in the spray tank, thoroughly agitating the mixture when adding the paste. The use of a barrel churn or a large sized egg beater in a round-bottomed kettle will assist in the rapid preparation of the paste.

Arsenate of lead may be made at home at a slightly less cost. For 50 gallons of diluted spray take 10 ounces arsenate of soda and dissolve this in a gallon of water (preferably hot) and in another gallon of water dissolve the acetate of lead. When completely dissolved pour the two simultaneously into the mixing tub containing the rest of the 50 gallons of water; stir well and the spray is ready. The use of wooden vessels is advised in handling these solutions.

If desired the chemicals can be dissolved separately and kept as stock solutions, and the arsenate of lead prepared as needed. For example, 31 pounds 4 ounces arsenate of soda dissolved in 50 gallons of water by suspending it at the top of the barrel in a coarse sack, and 75 pounds acetate of lead similarly dissolved in 50 gallons of water and thoroughly mixed, will give solutions containing sufficient material so that one gallon of each added to 48 gallons of water will give the strength mentioned in the formula. The main difficulty with the homemade arsenate of lead is that the chemicals used are apt to be of varying strength. The arsenate of soda is often adulterated with salt. In purchasing supplies of these materials it is well to get a statement of the quantities required to secure complete combination.

Two pounds of the commercial arsenate of lead or the homemade (when prepared according to the above formula) will prove effective for the usual sprayings, but when results are desired at once or the attack of the insects is very severe three or more pounds can be used. For stone fruits in addition to the two pound strength the use of 2 or 3 pounds of well slaked lime is advised.

Arsenate of lead is preferable to Paris green as an arsenical spray for it generally contains less free arsenic, injures the fruit and foliage less, is practically insoluble in water and therefore may be used at almost excessive strengths without serious injury to most foliage. It is very adhesive and is not as readily washed from the trees as Paris green. Properly prepared arsenate of lead, owing to its fine particles, remains in suspension longer and is capable of moreuniform distribution. Paris green is the stronger poison and while the same amount of poison will cost more in arsenate of lead the latter is desirable in orchard work.

PARIS GREEN.

4	ounces Paris green
1	pound lump lime
50	gallons water

Slake the lime carefully in a small quantity of water. When completely slaked add sufficient water to make a milky paste. Pour this through a fine strainer into the spray barrel or tank containing water sufficient to make fifty gallons. Mix the four ounces of Paris green with a small quantity of water and pour into the lime and water mixture through a strainer. The Paris green may be more readily and thoroughly mixed with the water if the two be placed in a bottle or jar and violently shaken for a few seconds before being added to the liquid in the spray tank. Thorough and constant agitation of the mixture during its application is necessary, as Paris green settles to the bottom of the tank in a few minutes if the preparation is left standing.

WHITE HELLEBORE.

1	pound white hellebore
50	gallons water
	or
1	ounce white hellebore
3	gallons water

Mix the hellebore with a small quantity of water and pour into the spray tank containing the required amount of water.

White hellebore may also be applied as a dust spray by mixing with 5 to 10 parts of flour or road dust, and with this, dust the plants when the dew is on, either early in the morning or late in the evening. White hellebore loses its strength very rapidly when exposed to the air, and should be kept in air tight receptacles. Material carried over from one year to the next is liable to be of little value.

INSECTICIDES FOR SUCKING INSECTS.—For those insects which obtain their food by sucking the plant juices the poisons used for chewing insects are of little value. Insects of this class require a spray which will corrode their bodies or stop their breathing pores. The efficiency of these sprays depends very largely upon the thoroughness of application, for the insect to be killed must be covered with the spray material.

This class of sprays is intended for such insects as plant lice, and other soft bodied sucking insects; among these are green apple aphis, wooly aphis, pear tree psylla, cherry aphis, such young scale insects as the oyster-shell, bark-louse, San Jose scale, scurfy scale and mealy bug.

LIME AND SULPHUR.

Homemade—15	pounds lump lime
15	pounds flour or flours of sulfur
50	gallons water

Commercial—There are many commercial preparations of lime and sulfur on the market and as the composition varies with the manufacturer it is impossible to recommend any particular dilution but in all cases the directions on the packages should be followed.

The method of preparation of the homemade lime and sulfur wash is taken from a circular on "Practical Treatment for the San Jose Scale", prepared by Dr. S. A. Forbes, State Entomologist. "Materials, 15 pounds of lime, 15 pounds sulfur and 50 gallons fairly soft water. For 50 gallons of the spray, heat 12 gallons of water in a 40 gallon iron kettle, mixing in the meantime, in a separate vessel, 15 pounds of sulfur with enough water to form a thin paste. Add this sulfur to the water in the kettle and bring the mixture to a temperature just below boiling. Then add 15 pounds of best lump lime, keeping cold water at hand to use as the ixture threatens to boil over. After the lime is fully slaked, boil for 40 minutes, with almost constant stirring. Then strain into a 50 gallon spray tank and fill with water, which had better be warm, although cold water will do. To prepare 100 gallons of the spray at a time, heat 20 gallons of water in the 40 gallon kettle, add 30 pounds of sulfur—previously reduced to a thin paste with water—and to this put 30 pounds of lime. Boil as before, and dilute to 100 gallons. Steam will be found more convenient to cook with than direct heat.

"Solutions of lime and sulfur which may be purchased ready for use after dilution may be substituted for the homemade preparation described above.

"*****Persons preparing or applying the spray should avoid getting it upon the bare hands or face as it is very caustic. The undiluted mixture should not be left in the kettle over night, as it is likely to harden and cake, and is then worthless. See that all barrels and apparatus are thoroughly cleaned before using the mixture in them, otherwise the nozzles are likely to clog. Thoroughly clean kettles, hose, barrels, pumps, and all spraying apparatus when the work with the wash is over for the season.

"Use this wash on the trees after the leaves are off, preferably in the spring before the buds have commenced to open. Never use the wash on

trees in leaf. Thoroughly coast the trees, being careful to cover the smaller twigs and branches and to get the mixture in all the forks and crevices."

KEROSENE EMULSION.

½ pound (chipped) hard soap
or
1 pound whale-oil soap
2 gallons kerosene
1 gallon soft water

To be diluted with water according to strength desired.

The soap is cut into small pieces and dissolved in the soft water heated to boiling, then remove the water from the fire and add the kerosene to the hot mixture, churning it violently at the same time. Pumping the mixture back upon itself for 5 to 10 minutes through a hand force pump is an excellent method of mixing the emulsion. Continue the pumping until a creamy combination is obtained which shows no free oil on its surface. This is a concentrated solution and must not be used on plants until further diluted as directed below.

For application to apple and pear trees in foliage, for green apple aphis, wooly aphis, pear tree psylla, etc., dilute one gallon of the emulsion with nine gallons of water. For cherry, plum and peach trees, and plants with tender foliage dilute with twelve gallons of water. For house plants dilute with fifteen gallons of water.

WHALE-OIL SOAP.

1 pound whale-oil soap
8 gallons water

Whale-oil soap is purchased ready for use and the spray mixture is prepared by dissolving the soap in boiling water and diluting to the required strength. This spray at the above strength is excellent for plant lice or aphis. The disagreeable odor of whale-oil soap makes it unsuitable for use as a remedy for pests on house plants.

FUNGICIDES.

A fungicide is a spray material which has for its active agent a chemical in which the spores of fungi aid in uniform distribution of the cannot develop, and a mediu to chemical. An example of a fungicide is to be had in Bordeaux mixture in which copper is the active agent, with lime to neutralize the effect and make it adhere to the foliage, and water to distribute it over the tree. Fungicides are designed to prevent or control such fungi as apple scab, bitter rot, black rot, mildew of the grape and gooseberry, tomato and strawberry rusts and other fungi of a similar nature. Injury to the foli age of plants following the application of Bordeaux mixture and other sprays is of common occurrence. Much of the injury reported or observed is preventable. The principal sources of injury as determined by observation are:

1. Use of improper or impure materials.
2. Carelessness in making the mixtures.
3. Improper and ineffective application.

The first two of these sources of difficulty can be entirely eliminated and the third greatly mitigated by reasonable attention and supervision. Formulas must be respected and small details of practice must receive attention in order to attain best results.

BORDEAUX MIXTURE.

4 pounds copper sulfate
4 pounds lump lime.
50 gallons water

To make small quantities of Bordeaux mixture for use in the home orchard, the equipment should be two tubs holding about 30 gallons each and a small slaking box. For the tubs oil barrels, cut in halves, are sufficient. Dissolve the four pounds of copper sulfate in the water by suspending it in a coarse sack in the top of a tub containing 25 gallons of water. Slake the lime in the box, being careful that only sufficient water is used to get a fine quality of lime putty without burning the lime. Strain this through a fine 30 mesh sieve into the second tub and dilute to 25 gallons. Then after stirring both the lime and copper sulfate, pour the two simultaneously through a strainer into the spray tank, stirring thoroughly as the two are being run together.

When large quantities of Bordeaux mixture are to be made it is well to prepare stock solutions of the copper sulfate and lime before the spray season opens. These stock solutions are generally made up so that each gallon of the spray contains 1 pound of material, although a strength of two pounds to the gallon is used at times. The stock solution of copper sulfate is prepared by placing 50 pounds of the crystals in a coarse sack in the top of a barrel containing 50 gallons of water, and a stock solution of lime is prepared by taking 50 pounds of lump lime slaked to a putty, and diluted to 50 gallons. The lime putty is made by slaking 50 pounds of lump lime in a shallow lime box, using care that only sufficient water is added to slake the lime and not allow it to burn, and after the violent action is over to allow the putty to stand a short time before adding the rest of the 50 gallons of water. The success of the Bordeaux depends so much upon the lime used that the following extract from Bulletin No. 135 is of interest. "The two common faults observed in practice are: the addition of too little water, which results in the development of too much heat and the 'burning' of the lime. In this case there are many small lumps that do not completely slake and will be thrown out when the lime is strained into the tank. The second fault is the addition of too large an amount of water resulting in 'drowning' of the lime. This, likewise, results in incomplete slaking, and therefore, a reduction in the actual amount of lime added to the mixture. In some cases where the lime is neither perfectly fresh nor of great purity these losses may so reduce the amount that the copper is not all precipitated and serious injury follows. Lime, during the process of slaking, should have constant attention; water should be added in small amounts as needed to keep the action even and to insure that perfect slaking which can be obtained in no other way. It is best to slake a definite number of pounds and when thoroughly slaked transfer to a barrel containing such amount of water as, added to the quantity used in slaking, will give a milk containing a definite quantity of lime to the gallon. Having the stock solutions prepared, the next step is dilution preparatory to mixing.

"The diluting tubs should each have a capacity in excess of one hundred gallons. A palm-oil cask of 250 gallons capacity, cut in half, will supply two tubs that serve the purpose admirably. We will suppose that the standard 4-4-50 formula is to be used and that the mixture is to be made in lots of 200 gallons. In one diluting tub, place 16 gallons of the stock solution of copper sulfate, made up 1 pound to the gallon, then add 84 gallons of water. The first lot should be carefully easured and the height at which it stands in the tub marked, so that in filling for succeeding mixtures, it is only necessary to fill to the mark. Thoroughly agitate the milk of li e and, if it has been made up 1 pound to the gallon, transfer 16 gallons to the other tub and fill up with water in like amount as for the copper sulfate solution and an equal quantity of milk of lime. This is on the plan of full dilution before mixing, which has been shown by experience to possess advantages over other ways of mixing, such as adding concentrated solution of copper to fully diluted copper sulfate, or combining the two ingredients in concentrated form and then diluting. The resulting mixture made by full and equal dilution settles less rapidly, is less frequently injurious, and attains a maximum of adhesiveness. These points of difference have been determined by field and laboratory experiments with mixtures made in the different ways, and we have no hesitation in urging equal and full dilution before mixing as being the best plan to follow. In mixing, equal streams may be conducted directly into a strainer supported over the receiving tank, or the streams may meet in a short trough which terminates on the strainer. Before starting the streams, the milk of lime must be thoroughly stirred and this agitation should continue until the mixing is completed, in order to insure uniformity in the combination."

Bordeaux mixture attacks iron and for this reason it is best to use brass or copper measures, and strainers, wooden pails and a spray pump with brass parts, especially where they come in contact with the mixture. Fresh Bordeaux is advised, for any Bordeaux mixture which has stood over night or settled thoroughly may prove unsafe.

LIME AND SULFUR FOR USE ON FOLIAGE.

1 gallon commercial material (mentioned elsewhere)
30 gallons water

Measure the water for the spray into the spray tank and add the lime and sulfur, agitating thoroughly. This spray has proven of value for use against apple scab while the trees are in leaf.

SELF-BOILED LIME AND SULFUR

8 pounds flowers of sulfur
8 pounds lump lime
50 gallons cold water

Place the lime and sulfur together in a barrel and add just enough COLD water to slake the lime, stirring constantly to prevent burning. Keep a piece of carpet or old burlap sack over the top of the barrel to retain all the heat possble. Watch the mixture carefully and as soon as an orange colored liquid starts to gather on the surface add the rest of the water. Strain through a fine sieve to remove the particles of lime, but work all the sulfur through. This spray is proving very satisfactory as a summer spray on the peach against the brown rot and scab.

CAUTION.—Do not use hot water or allow the mixture to stand after the lime is slaked and before dilution. In this spray we do not want the soluble sulfids (orange colored) to form, for these will injure the foliage and fruit.

COMBINED INSECTICIDES AND FUNGICIDES.

It is found desirable at times to combat the insect pests and fungi at one application of the spray and for this a combination of the insecticide and fungicide is used. This results in a saving in the cost of labor and time spent in spraying. The combinations given below are used with success in Illinois.

BORDEAUX-ARSENATE OF LEAD.

2 pounds arsenate of lead
50 gallons Bordeaux mixture
or
10 ounces arsenate of soda
24 ounces acetate of lead
50 gallons Bordeaux mixture

Prepare the commercial arsenate of lead by working into a smooth paste and add it to the diluted milk of lime. Prepare the homemade arsenate of lead according to the directions given under arsenate of lead and mix with the milk of lime. Then bring the fully diluted copper sulfate solution and the milk of lime together in the manner described in making Bordeaux mixture. Where a stronger poison is desired the arsenate of lead can be increased to 3 or 4 pounds. A more uniform distribution of the arsenate of lead is secured throughout the spray when it is added to the milk of lime instead of placing it in the spray tank.

BORDEAUX-PARIS GREEN.

4 ounces Paris green
50 gallons Bordeaux mixture

Mix the Paris green into a thin paste and add to the milk of lime and proceed to mix the Bordeaux according to the directions elsewhere.

LIME-SULFUR AND ARSENATE OF LEAD.

2 pounds arsenate of lead
1¾ gallons commercial lime and sulfur
48 gallons water
or
2 pounds arsenate of lead
50 gallons self-boiled lime and sulfur

Have the arsenate of lead in the form of a smooth paste and add to the lime and sulfur solution at the same time stirring the spray thoroughly. If a power sprayer is used it is advisable to keep the agitator working.

SPRAY PUMPS AND EQUIPMENT.

For the proper application of spray materials it is necessary that we have a well arranged place to prepare the spray. This will vary with the extent of the operations and the acerage to be sprayed, but should be ample. Small quantities of the spray can be prepared in large candy pails or small kegs, reducing the formulas in proportion to the amount of spray desired. The better the equipment the less troublesome and disagreeable will be the spray operations.

A good pump should be simple, compact, light, durable and have ample capacity to do the required work quickly and easily. A pump with few projecting parts, with brass valves and cylinder, and with an outside packed plunger, will prove the most satisfactory.

For use in the home garden, on the small bushes and trees, as well as in the greenhouse, there is no pump more suitable than some form of the Auto-sprayers or the bucket pumps. These pumps in brass can be obtained from any seedsman or florist for about $7.00 for the Auto-sprayer and for $3.50 or $4.50 for the bucket pump.

Where there are several large trees to be sprayed, the use of a larger pump will be desirable. The barrel pump will serve, where the acerage to be sprayed is three or less. These pumps are made to be fitted either in the end or side of a barrel. Usually a good kerosene oil barrel is used, with the pump in the end, for the pump is more easily operated at this height.

When the acerage to be sprayed is less than ten or more than three, a tank pump is more suitable. This is a double acting pump with a plunger of 2½ to 3 inches in diameter and a large air chamber so that a steady pressure of about 100 pounds can be maintained. These pumps are designed to supply two lines of hose carrying 4 to 6 Vermorel nozzels. A pump of this character should be mounted upon a tank holding about 200 gallons.

The use of a power sprayer will depend a good deal upon the capital, amount and price of labor and the acerage to be sprayed. Where there are ten or more acres to be sprayed during the season some form of a power outfit will be useful. Power may be obtained from the traction

of the machine, compressed gas or air, gasoline or steam. The two most used are the traction and the gasoline machines.

Where small fruits, strawberries, grapes, and plants of that type, are to be sprayed the traction machine is satisfactory. These machines have a pump driven by a wheel and the pressure is mantained by means of storage tanks. Special fittings are provided for spraying rows of berries or potatoes. These attachments are provided for use with the hand outfits when desired.

The gasoline sprayer can be obtained from different manufacturers at prices ranging from $275 to $400 for the complete mounted outfits.

Besides the spray pump the outfit for spraying will need hose, nozzles, extension rods, strainer, measures and barrels for the spray mixture.

The spray nozzle which is proving very satisfactory now is of the wide Vermorel type, of which the "Friend" is a very popular style. This form of nozzle is sold by all the dealers in spraying supplies underone name or another, among which are the "Simplex", "Mistry" and "Cushman". These nozzles will cost 75c to $1.00 each. The small type of Vermorel is still the most satisfactory nozzle for general use and these can be obtained from dealers in spraying supplies, as can the rest of the accessories needed in spraying.

The hose should be of high grade, 1 in. or ⅞ in. in diameter and 5 to 7 ply, and for general use lengths of 25 feet will be sufficient. Sherman clamps are the best to hold the hose on the couplings, especially where subjected to any strain. The extension pole is of bamboo, 10 to 12 feet long, and lined with brass or aluminum tubing; coupling are provided for attachment of the hose and nozzles. The cut-off valve should work with half a turn. For a strain work with a half turn. For a strainer, one with 30 meshes of brass wire to the inch will be the most serviceable; the style will vary with the capacity.

Taking the cost of the complete equipment into account of spray outfit for use in the home garden will cost $10 to $12, while the equipment for the barrel pump will cost $30.00. The larger outfits will cost more in proportion, for they will require a more extensive outfit for preparation of the spray.

Butter Defects and How to Correct Them.

The following classification of butter defects and means of overcoming them was prepared by M. Michels, formerly in charge of the Wisconsin Scoring Exhibitions, and published in Bulletin 182 of the Wisconsin station. It is intended as a ready reference that will aid the maker in locating the cause of the most common defects and applying a remedy:

A DEFINITION OF GOOD BUTTER.

Flavor should be rich, pleasing, creamy and suggest nothing objectionable to either the taste or smell. Body, should be firm and waxy. Color, should be even showing a luster and an oat straw shade unless the particular market wants a different color. Salt, well dissolved and just enough to bring out the highest flavor of the butter. Package, clean and neat in appearance.

BUTTER FLAVOR DEFECTS.

1. Curdy Flavors: Indicated by a sour cottage cheese smell and taste.

Causes: 1f Adding wheyed-off starters to cream. 2. Adding an over-ripe starter while the cream is at too high a temperature. 3. Ripening a very thin cream at a high temperature.

Remedies: 1. Do not use a starter that shows whey on top. 2. Never add a high ripened starter until the cream is cooled down to 65 degrees F. 3. Cream should test 30 per cent or more butter fat, a lower testing cream should not be ripened much above 60 degrees F.

II. High Acid Flavors: Indicated by an excessive sour smell and taste.

Causes: 1. Over-ripening of the cream before churning. 2. The use of an over-ripe starter. 3. Receiving part of the cream in an over-ripe condition.

Remedies: 1. Develop less acid in the cream before churning. 2. Do not use a starter having over 0.70 per cent acid. 3. Cream containing over 0.50 per cent of acid should not be mixed with sweeter cream, but churned separately.

III. Lacking Flavor: Lacking taste and smell.

Causes: 1. Churning the cream too sweet. 2. Too much washing of the butter granules. 3. By using a dead or inactive starter.

Remedies: Cream should not contain less than 0.45 per cent of acid, even when a light flavored butter is wanted. 2. When butter is churned at low temperatures, one washing or rinsing is sufficient. 3. Never use a newly prepared starter until it sours readily.

IV. Rancid or Old Cream Flavors: Smells and tastes like old cream or old butter.

Causes: 1. Over-ripening the cream. 2. Holding the ripening cream too long before churning. 3. Ripening the cream at very high temperatures. 4. Holding some of the cream or milk too long before churning. 5. Keeping the butter at too high a temperature after churning.

Remedies: 1. When cream is kept over night to be churned the next morning, it should not contain more than .55 per cent of acid. 2. Cream should not be cooled down after ripening with the idea that it will keep its, fine, creamy, acid flavor until churned several hours later. 3. Start ripening the cream below 68 degrees F. 4. Old or over-ripe cream or milk should not be mixed with sweet cream, but churned separately. Milk or cream, even under the most favorable conditions should not be kept longer than two days. 5. After churning, keep the butter in the refrigerator at a temperature of 50 degrees or below.

V. Oily or Greasy Flavors: Indicated by an oily and greasy taste and smell.

Causes: 1. Holding the milk or cream at too high a temperature before delivering to the creamery. 2. Ripening, churning and working when at too high a temperature. 3. Using a poor grade or too much butter color.

Remedies: 1. Hand-separator cream should be cooled to 60 degrees within an hour after separating. 2. Do not ripen the cream above 65 degrees F. churn and work at low enough temperature so that one washing of the granules will take out all of the butter milk, it will then be in such condition that the butter will not turn greasy while being worked. 3. Never use bad smelling color or one that has a sediment at the bottom; use no more color than is necessary to satisfy your trade.

VI. Fishy Flavors: Indicated by bad taste and fishy smell.

Causes: 1. Uncleanliness in handling the cream and milk at the farm. 2. Leaky cream or milk vats at the creamery. 3. May be produced by certain species of bacteria.

Remedies: 1. Keep separators pails, cans and tanks for cooling clean at all times. 2. Never use a leaky vat, dipper or can for handling milk or cream. 3. If produced by certain species of bacteria it is certain that they grow in dirt, hence cleanliness is necessary.

VII. Stable Flavors: A bad taste and cow stable smell.

Causes: 1. Uncleanliness in milking. 2. Keeping the cream or milk in or near a dirty cow stable.

Remedies: 1. See that the stable and cows are clean before milking and milk with clean, dry hands. 2. All milk should be removed from the stable as soon as milking is finished. Never keep the milk or cream near the stable or manure piles.

VIII. Bitter Flavors: Indicated by a bitter taste.

Causes: 1. Holding cream too long a time at low temperature before churning. 2. May develop in the starter. 3. Bacteria brushed from the cow's udder while milking.

Remedies: 1. Cream should not be held at well-water temperature more than two days. Bitter flavors are often noticed in cream which is hung in the well or set in the spring for three or four days. 2. Set the starter with a small amount of mother starter at 70 degrees F. rather than a large amount at 55 degrees. (One quart of starterline to 100 pounds of pasteurized skim milk is sufficient.) 3. Milk clean cows in clean stables by clean hands.

IX. Weedy and Food Flavors: Indicated by weedy and food smell.

Causes: 1. Cows feeding on weeds. 2. Feeding strong scented food just before or during milking. 3. Exposing milk in an atmosphere laden with objectionable food flavors.

Remedies: 1. By giving cows a plenty of good pasture feed they will not eat weeds enough to flavor the milk. 2. Do not feed silage, brewer's grain or slightly decayed feed shortly before or during milking. 3. Do not keep milk in the same room with feed of any kind.

X. Unclean Flavors: Unclean smell or taste.

Causes: 1. Dirty cans and milk utensils. 2. Dirty water may cause an undesirable aroma, but nothing objectionable to the taste. 3. Impure air and dirty starter may give an undesirable taste, but nothing objectionable in aroma. 4. When the judges fail to find words to describe a flavor, this expression is used as a last resort.

BODY OR TEXTURE DEFECTS.

I. Weak Body: Soft and weak when pressed with thumb or finger; sometimes coarse in appearance.

Causes: 1. Ripening, churning and working at too high temperatures. 2. Cream not cooled long enough before churning. 3. Too much moisture in butter. 4. Character of the butter fat.

Remedies: 1. Ripen, churn and work the butter at as low a temperature as practicable. 2. Remember that with cream churned right after being cooled down from 60 degrees, the churning temperature may have to be lowered to 50 or below, while cream kept at 55 over night may be churned safely at 57 or 58. 3. By employing the ordinary methods of washing and working not over per cent of moisture will be left in the butter. 4. Change the feed of the cows. This trouble is seldom found in the butter fat from mixed herds.

II. Greasy Body: No grain, dead in appearance.

Causes: 1. Over-churning of the butter. 2. Over-working. 3. Washing the butter granules in too warm wash water. 4. Churning and working at too high temperatures.

Remedies: 1. Stop churning when the granules are about the size of wheat kernels. 2. Work the butter no more than is necessary. 3. Never use wash water above the temperature of the butter-milk when drawn. 4. Churn at low temperatures so that the butter granules will not stick together while washing.

III. Body Showing Too Much Moisture.

Causes: 1. Stopping the churn when the granules are too fine. 2. Under-working the butter.

Remedies: 1. Churn granules to the size of wheat kernels. 2. Work but once and until smooth and waxy.

IV. Milky Brine.

Causes: 1. Churning at too high temperatures. 2. Over-churning. 3. Improper washing.

Remedies: 1. Churn at lower temperatures so that the granules will not stick together. 2. Churn until granules are about the size of wheat kernels. 3. Fill the churn with wash water about the same height in the churn as the cream occupied when the churning started.

V. Color: Mottled appearance.

Causes: 1. Uneven distribution of the salt. 2. Using too cool or too warm wash water. 3. Not enough moisture in butter when worked. 4. Churning too warm.

Remedies: 1. Distribute and work the salt evenly. 2. Have the wash water about the same temperature as that of the butter-milk when drawn. 3. Leave enough moisture in the butter so that the salt will readily dissolve while working. 4. Churn the cream at a temperature low enough to prevent the granules from sticking together and allow the butter-milk to be washed out, then salt is quickly and more easily distributed and dissolved. Streaked butter is simply a mild case of mottles.

VI. Color Specks: Tiny color specks which appear throughout the butter.

Causes: 1. Using a poor grade of color. 2. Allowing the color to become too old. 3. Keeping the color at too high a temperature.

Remedies: 1. Buy only the best grade of color. 2. Buy in small quantities. 3. Never keep the color near a radiator or boiler.

VII. Salting Defects: Indicated by taste.

Causes: 1. Too coarse, gritty. 2. Unevenly distributed. 3. Too low or too high.

Remedies: 1. Leave enough moisture on the granular butter and work sufficiently to dissolve the salt 2. Distribute evenly and revolve the churn a few times before setting rollers in motion. 3. Too little salt often fails to bring out the best flavor. Too much salt leaves a coarseness of taste that covers up the fine, creamy flavor so much desired in butter.

VIII. Package defects.

Causes: 1. Bad appearing, dilapidated package. 2. Badly trimmed and dirty on top or sides. 3. Butter not packed solid.

Remedies: 1. The package and covers must look neat and clean and not be too old. 2. Cut top of butter with a string or wire and wipe the dust out of cover before placing it on the tub. 3. Pack small amounts of butter in the tub at a time and use the packer after each addition. Strip the tub from the butter occasionally and note the appearance of the butter surface.

War on the Weeds.

Are you preparing to wage an incessant war against the noxious weeds in your fields this year? Study the life history of the weeds and then follow the most feasable methods for eradicating them. Different weeds will require different treatments for combatting them.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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WHAT CAN WE AFFORD.

The following from a recent issue of the Maine Farmer is worth passing along:

"A short time since I heard a working farmer "say in all seriousness, "I can't afford a sanitary "barn, and if pushed shall have to go out of the "milk business." There is no question but hundreds "feel the same and the unjust and arbitrary require- "ments of the Boards of Health are largely respon- "sible for the decline of our dairy work. At the "same time every man wants just what the city "officials are aiming at, that is healthy, neat and "clean conditions in the barns. We are all learning "that what once sufficed will not answer today, and "for the reason the little seven by nine sleeping "room, opening directly from the living room, and "with but a single window is being discarded. "More air, more sunlight for the sleeping rooms is "now demanded. We are finding that sunlight is a "germ destroyer and pure air an invigorator and so "are opening up to receive the most of God's choic- "est blessing. This is as true in the barn as the "house and slowly is coming. The greatest obsta- "cle is the want of a clean, common sense idea of "what is sanitary and here the rules and construc- "tion placed on the same by the board of health, are "at fault. In one city it was required "that every "cow furnishing milk for that city trade should stand "upon a platform not less than eight feet long." "The man who made that rule either did not know "the length of a yard stick or had never been inside "a sanitary milk barn. This is only on a par with a "lot of the senseless stuff printed and sent broadcast "by those who assume to say what is and what is not "healthy.

"On the other hand every man may have a sanitary tie-up and produce normal milk, healthy and "below the bacteria count established. While the "King system is the ideal for ventilation, it must be "constructed by a skilled mechanic and even then is "not to be relied on. Any man can stop throwing "the manure out under the eaves, can whitewash the "tie-up, can put in long windows and use thin muslin "instead of glass, can sweep down the cobwebs and "keep the floor clean, can bed the cows, can wipe "down the cow's sides and udder with a damp cloth "before milking, and certainly can have his hands clean when he milks. The whole trouble with milk "comes after it leaves the cow's teats, and if condi- "tions are all cleanly and the milk is removed as "soon as drawn from the udder and put at once into "clean cans where it can be kept at a low temper- "ature there is no danger of trouble with any board "of health. These officials aim at a clean product "and this the farmer wants to produce. Sanitary "conditions are only clean conditions made healthy at "every step and this every man wants for himself, "his family and his customers. Cut out the sense- "less frills but make the tie-up roomy, sunny, clean "and sweet and good milk and more milk will fol- "low."

A BOER GIRL LEARNS FROM CANADA.

A young woman always optimistic, keen to notice all of an educative nature, and enthusiastic over anything Canadian, and not afraid to show it, is Miss Jeanette C. van Duyn, the dutch girl from Transvaal who is now studying at Macdonald College at St. Anne de Bellevue, and will go to Guelph Agricultural College during the fall term. This young woman represents the pioneer educating influence in the establishing of a system of domestic economy among the agricultural classes of the Dutch in South Africa. She has come to Canada as the special representative of the Agricultural Department of the new Government of the Transvaal.

"Dutch people, the women, especially of the farming classes, are most backward in everything pertaining to household economy," Miss van Duyn declared. "That is the reason I was sent here. I had read a great deal of what Canada was doing for her agriculturists at MacDonald College and Guelph, so I got my Government to take up the idea, and they commissioned me to study conditions. I will be in this country nearly two years, when I return to the Transvaal to teach what I have learned. My special object will be to organize a system of woman's institutes, which seem to be doing so much for the women who live on the farms of Ontario. It is these women of my country who need looking after; for all these years they have been pitiably neglected.

"Am I native Dutch?" she paused to answer the interjection. Then she laughed one of those infectious laughs. "Oh, yes. Call me a Boer. Indeed, when the war ended I could not speak a word of English. But I soon learned that it would be essential to my future; and I was one of the first to learn the tongue. Finally I got along so well that I was used as a translator of important Government documents.

"Canada is so lovely that I cannot realize it at all," she laughed in answer to a question. "I never saw snow until this winter. And, do you know, when I used to look out of my window in the mornings across the beautiful white fields and far up the ice-locked Ottawa River, all covered with the clear, white crystals, I had to pinch myself to make sure I was not in fairyland. It makes me want to keep on stopping here—for we have nothing that can compare with your scenic beauties. At least I have one firm resolve: The minute I return to my native land my whole ambition will be to start at once to save money for another trip, and soon, to Canada."

It is only ten years ago that Canada was cheering over the success of her soldier boys on the battle-field at Paardeberg. The Empire was in the throes of the terrible South African war. Yet within that short space of time a Boer girl comes here to copy our institutions for the benefit of the people whom we fought.

"The sentiment is all changed in the Transvaal now," she tells you. "We Boers cannot but appreciate the liberal way in which Britain treated us. When we were given our own parliament it was wonderful how differently people began to regard England. The old feeling of hatred is fast dying out. My people look upon England as their friend. Because England has done more to assist the farmer than was ever done in the past in our country. Of course there are some Boers in the backlying countries who still feel antagonistic, but every year this is being more and more overcome, when the benefits of England reach farther and farther inland. Even now I believe the British feeling to be strong enough to prompt our men to go out in Britian's cause like Canadians or any other of the colonies in defence of the Empire.

"Here at Macdonalds College, with so many hundred young men representatives of the Agriculturists of Canada, I cannot but note the advantages they have had over the Boer boy. He is years behind the times compared with the young Canadian.

"The war?" she echoed the question, and a seriousness came into her ever-happy face. "It was horrible. We felt so bitterly against our oppressors. We felt so crushed at defeat. You can never imagine it; no one can unless he is on the side of a great losing struggle. To feel the hand of the enemy getting tighter and tighter upon you, like some great octopus, until finally you are crushed in the awful grasp.

"I was in Pretoria throughout the war. We there felt so safe. Our town so snug, surrounded by kopjes, all fort-crowned, seemed to us quite secure. Then imagine our great surprise one morning—Oh, I remember it so vividly—the khaki-uniformed soldiers came swarming over the hills like locusts, into the valley of our town. We were prisoners! Oh, I shudder even yet. It was as an horrible nightmare. We could not but pity the poor soldiers. They were food crazy. They were ravenously starved. You know we Dutch people each have our own great family bake oven behind our homes. There is no bread peddler, like in Canada. That morning the Kaffir boy was baking our bread. The hungry soldiers saw him. They needed no invitation to eat. But they broke open the oven and snatched the still smoking bread and devoured it all. Strong as were our sympathies for our fellow countrymen, we took these men, our foes, and fed them with the best we had in our homes. Anyone would have done the same.

Miss Van Duyn is undoubtedly the popular girl of the college term. Save for a slightly noticeable accent, a somewhat broken English, there is little to tell the stranger that this young woman is Dutch. She is now quite Canadianized in views and manners. "Snowshoeing! It is great. Skating! It is delightful." Her only complaint is that that there is so much to learn that she will not be able to master all before her return.

Miss Van Duyn has proved one of the brilliant science students of Macdonald College this term. She has just been appointed by the Ontario Government to go on a lecture tour of the Women's Institutes of the Province during June. For a month she will study conditions in the Department of Agricture in the Parliament buildings, and with the fall term will enter Guelph Agricultural College.

Is there not a lesson in the foregoing article for the women of our Maritime Provinces? In last issue we sent forth a plea for more work along the line of Women's Institutes in Maritime Canada. It was shown how strongly the province of Ontario is organized for institute work. And now we find a Dutch girl from far off South Africa, in Canada for the purpose of learning Canadian ways re Women's Institutes.

We have an institution at Truro where special short courses in Domestic Economy are given every winter and yet how many of our young women do we find attending them? Not near so many as might attend. Our Maritime ladies are equal if not superior to any other on the face of the earth and we trust that each and every progressive girl and woman will strive to attend the short courses at Truro next winter and then we fieel confident organization will surely follow.

Last Session of the N. B. Committee on Agriculture.

The last meeting for the session of the Committee on Agriculture was most interesting and successful. Many practical suggestions were made and useful ideas advanced. Action by the Department of Agriculture upon the resolutions adopted will result in a larger interest and more practical results from the activities of the Agricultural Societies; and a most important advance movement was inaugurated in the recommendation that the Department conduct an experimental farm, even if only in a small way.

At the opening of the meeting Mr. Burgess moved, seconded by Mr. Sheridan, that the Department of Agriculture should provide for adequate supervision and encouragement of Agricultural Societies and inspection of their work and accounts, to ensure careful and systematic work by all Societies, and the accurate and prompt accounting of the monies they handle.

This resolution was unanimously adopted and precipitated a general discussion about the wisdom of the Societies holding annual or semi-annual fall fairs. Although no formal resolution was presented the following suggestions were approved by the Committee.

(a) That the dates and prize lists of all proposed exhibitions be submitted to the Commissioner for Agriculture.

(b) In the case of male animals or birds no prizes be given to other than pure breds.

(c) At least one judge to be furnished by the Department of Agriculture whose hotel expenses should be paid by the Society holding the exhibition.

(d) Facilities to be afforded visitors to see the judging of all live stock classes and the judges to explain their awards.

(e) All cheese and butter exhibits judged by the score card system.

(f) Prizes should be given to encourage school children in the growing of vegetables and flowers and in selection of seed grain.

(g) An evening meeting should be held when the judges should give addresses and point out the lessons to be learned from the exhibition.

Mr. Pender suggested that there should be sale days in each parish at least twice a year, where live soock, seeds, etc., could be brought together to the mutual advantage of buyer and seller, and that pamphlets upon different topics of agricultural information should be frequently printed and distributed by the Department of Agriculture.

Mr. Hubbard stated that it was the idea of the Commissioner for Agriculture that an assistant be employed in the Department who can speak French, and part of his duty will be to visit, instruct, advise and encourage the Agricultural Societies in French districts and the Deputy commissioner would do likewise among the English Societies.

The following resolution was adopted on motion of Mr. Pender, seconded by Mr. Leger (Gloucester) whereas, the various Agricultural Societies of the province in importing and placing live stock etc., frequently desire to sell such importations among their members by auction; and, whereas, these societies as well as private individuals who impart or deal in live stock find essential to success to employ auctioneers who have knowledge of the breeding and special value of live stock; Resolved, that it would be in the interest of the live stock industry to have legislation enabling Agricultural Society officers, or a man employed by them, to legally sell such stock by auction, and also to make it legal to employ special live stock auctioneers to sell, irrespective of where they may be registered in Canada.

Mr. Leger, Westmorland, thought that a start should be made by the Department upon an experimental or model farm for the province.

He moved the following resolution, which was seconded by Mr. Sheridan and passed unanimously:—Resolved, that the Department of Agriculture be recommended to make use, as far as possible, of the splendid facilities at the Provincial Institution at Fairville for agricultural experimental purposes, with special reference to increase of soil fertility; and that experiments be made during the present season in the application and use of commercial fertilizers.

A vote of thanks was extended to Mr. W. B. Dickson the chairman, on motion of Mr. Sheridan, seconded by Mr. Pender, as follows:—Resolved, that the thanks of this Committee be extended to the Chairman for the able manner in which he presided over the meetings of the Committee, and for the deep interest he has taken and is manifesting in agriculture in our province, as evidenced by the greatly increased interest in this Committee, and further shown by the organization of a large and flourishing Agricultural Society at Hillsboro due very largely to the energy and activity of our Chairman.

Report of the Dairy and Cold Storage Branch.

Everything looks favorable for dairy production during the coming season. The cows have wintered well and there is plenty of feed. The pastures are in excellent condition and show no signs of winter killing. According to present indications the grass will be fully three weeks earlier than last year. These are the conditions along with an early season, which will make for an increased output and a smaller percentage of "fodder" cheese and butter.

It is impossible to say what the development will be in the shipment of cream to the United States. Articles on the subject, emanating apparently from the produce trade in New York, have been going the rounds of the press during the past week promising a big development of this trade. These articles are evidently inspired with the object of influencing the butter market. The conditions are too uncertain to warrant the building "of a chain of creameries along the Canadian Frontier," as is suggested. Everything depends on the comparative prices of butter in Canada and in the United States This trade is not desirable from the Canadian standpoint, because of its uncertainty. The individual producer who receives a higher price for his cream than he could get for it in Canada will, of course, be satisfied as long as that condition continues, but the moment it becomes unprofitable to the United States importer the market is gone and the disorganization of the cheese factories and creameries, which must follow, if there is any large export of cream, will then be seriously felt.

The apple season of 1909—10 has been rather unsatisfactory to many engaged in the export trade. The crop was a fairly large one and the high prices paid in the fall induced growers and packers to market many apples of very inferior quality, making the total quantity marketed much larger than was expected. The high price to the consumer, coupled with poor keeping quality owing to the warm weather in the autumn, discouraged consumption in a very marked degree and the inevitable slump followed. The situation was made all the worse on the local market by the comparatively low price and large quantity of oranges offered. It has been very common during the past winter to find oranges being sold cheaper than apples in the same shop. Notwithstanding the slump in the wholesale market and the large quantity of apples yet undisposed of, the retail price has been maintained at a high figure in many cases for very inferior fruit. Much of the stock put away by retailers and jobbers in cellars and other unsuitable places has not kept well, and the apples offered for sale have presented a very unattractive appearance. Nothing so much encourages the sale of apples as a display of sound, handsome fruit of the right variety.

The experiments in the storage of apples which this branch of the Department has been conducting during the past winter, by authority of the Minister of Agriculture, has shown conclusively the possibility of keeping apples in a sound condition and without waste if placed in cold storage as soon as taken from the tree, no matter what the conditions are at harvest time. Seven car loads of apples were purchased in the orchards last fall and were removed to cold storage immediately after being picked. They have been carried at a temperature of 30 to 32 degrees all winter, and to-day at London, St. John and Montreal we have Baldwins, Greenings and Spies in perfect condition, crisp and juicy, showing no appreciable waste. Apples that were packed in barrels in the orchard last fall are being shipped now without re-packing. This saving will pay the extra cost of cold storage Cold storage of apples is not always so successful, for the reason that they are generally allowed to remain too long after picking. There is no use of depending on cold storage to preserve over-mature, bruised or imperfect fruit.

Full details of these experiments will be published in bulletin form as soon as the final results are available.

Robert Coyle, jr., of Colborne, Ontario, was recently fined $100 for altering the grade marks on a shipment of apples after it had been passed by a Dominion Fruit Inspector.

Arrangements have just been completed through this office with the different railway lines for a continuance of the iced butter car service. The service began on May 16th and continues until October 15th. The Department of Agriculture will, as in the past, guarantee two-thirds of the earnings on a minimum car at current tariff rates, plums $4 per car for icing. The cars are operated over regular routes on specified days every week during the period mentioned to pick up butter in any quantity. Without this service shippers of less than carlots would be obliged to ship in ordinary cars or pay charges for a minimum carload (24,000 lb.)

The question of cold storage has been much in the public eye during the past few months and some very stupid and senseless things have been said about it. Suggestions to limit the period of storage ignore the fact that the condition of the goods when placed in store is of infinitely greater importance than the length of the storage period. There may be abuses—there are in most lines of business—but the broad facts remain that the cold storage warehouse enlarges the market during the periods when surplus stocks are available and thus encourage production, and it is, after all is said, the law of supply and demand which regulates the price of food products.

J. A. RUDDICK,
Commissioner.

Report of the Seed Branch.

Complaints have been made that the object of the Seed Control Act were in part being defeated in the clover seed producing districts through farmers trading among themselves with seed of inferior quality. It is claimed with good reason that if this practice becomes at all general it will be detrimental to both farmers and seedsmen, as the sowing of impure clover seed must result in lowering the general quality of future clover seed crops. Investigations that have thus far been made by seed inspectors indicate that considerable seed is this year being exchanged among farmers, but the charge that this seed is largely low grade is not born out. In the average only one inferior lot is is to be found on sale out of every twelve farmers' lots that are offered.

There is a special reason why the trade among farmers is larger than usnal this season. Many of the retail seed merchants ordered their clover seeds in December and January and paid the relatively high prices which then prevailed. In February the offerings of clover seed were more abundant and the prices were reduced accordingly. This reduction in price of seed has enabled farmers to sell to their neighbors at a lower price than the retail seed merchant who purchased early in the season have had to charge. In the sale of timothy, red clover, alsike and alfalfa seed farmers are liable to prosecution the same as seed merchants, and an additional number of inspectors have been added this year to secure the observance of the Seed Control Act on the part of farmers as well as seed merchants.

Farmers who have to buy their supplies of grass and clover seeds continue to be humbugged by the term, "Government standard," which is used by seed merchants to indicate seed of a quality that is not forbidden from sale by the minimum standard of quality named in section 8 of the Act. Farmers have not as yet come to understand the difference between No. 1 seed as defined in section 7 of the Act, and which allows only twelve weed seeds to the ounce of red clover, and the so-called "Government standard," which is really second or even third quality and which allows as many as 52 weed seeds to the ounce of red clover.

The amendments under the Seed Control Act, which are outlined in the December Monthly, were assented to and became law on the 17th of March. Under the amended Act certain additional regulations are fixed by the Government in Council. By these regulations the vitality standards of the different kinds have been fixed, and, in addition, the number of weed seeds which may be tolerated in No. 1 timothy, red clover and alfalfa seed has been reduced to five to the ounce, and No. 1 alsike to ten to the ounce.

At a joint meeting of the executive of the American Seed Trade Association and the State Seed commissioners held in Boston last December it was agreed in principle that the most satisfactory regulations for controlling the grass and clover seed trade of the United States would be on the basis of definite standards for the different grades, and that all seeds offered in the wholesale or retail trade should be graded according to those standards. It was found however, that an agreement could not be reached as to the definition for the standards of the respective grades, and, in lieu thereof the American Seed trade Association recommended that the trade in general be required to brand their packages of ten pounds or over with the actual percentage of purity.

Nearly all grass and clover seed offered to the trade in Canada are sold under grade names which have no meaning to the consumer. Experience in administering the Seed Control Act has shown that it would be in the best interests of good seed men as well as of farmers if the system of grading which is now commonly adopted by seedsmen were made uniform and according to definite standards of quality, taking into consideration particularly the noxious weed seed content. No. 1 timothy, red clover and alfalfa might be allowed to contain five noxious weed seeds per ounce, which would include approximately 25 per cent of the crop produced, twenty per ounce for No. 2, which would include an additional 35 per cent of the crop produced, and not more than eighty weed seeds per ounce for No 3 quality, which would include an additional 25 per cent of the crop produced, leaving a balance of 15 per cent prohibited. To get the same proportion of the crop produced in the different grades for alsike, twice the number of weed seeds per ounce would have to be allowed for each grade. It can scarcely be disputed that terms such as No. 1, 2 or No. 3 have more meaning, when applied to quality of any commodity, than have the names of birds, animals or fish, which are now most commonly used by seedsmen.

(Continued on page 534.)

HORTICULTURE

Insects and Diseases Affecting the Strawberry.

There are comparatively few insects and diseases which cause serious injury to the strawberry and in this bulletin, only the most important are described. The information in regard to insects has been taken mainly from the reports and other publications of the late Dr. James Fletcher, formerly Entomologist and Botanist of the Experimental Farms.

WHITE GRUB: (Lachnosterna fusca, Froh.)—The white grub often does much damage in strawberry plantations and sometimes gives fruit growers a great deal of trouble. If, however, the life-history of the insect is known and proper methods followed, it may be controlled. In brief, the method recommended by the late Dr. James Fletcher, Entomologist and Botanist to the Dominion Experimental Farms, is to take only one crop of fruit from a plantation and then plough it up, thus preventing the insect from passing through all its stages and so destroying it. Land for strawberries should be prepared by growing some crop that the white grub will not touch, and thus offering no inducement for them to stay in the soil

As the growing of other crops which the white grubs are fond of, near the strawberries may be the means of introducing them to the strawberry plantation, the following description of the life-history of this insect and the general remedies suggested are given. These are taken from Bulletin 52, "Insects Injurious to Grain and Fodder Crops and Vegetables," by Dr. James Fletcher:

"White Grubs are the larvae of the May Beetles or June Bugs, so called from their great abundance in May and June, when they may be found in large numbers flying around trees and bushes, showing particular preference for certain kinds, as willows, oaks, ashes, plums, maples and lilacs. The eggs are deposited in the ground, one to three inches below the surface, and hatch in from ten to eighteen days. The larvae feed on roots during the remainder of the season and burrow very deeply into the ground as winter approaches, returning again the following spring and doing a great deal of harm by eating the roots of grasses and many other kinds of plants, particularly corn and potatoes, their injury being most noticeable in the second year after sod has been ploughed down. It is claimed by Dr. S. A. Forbes that a second winter and summer is passed as a larvae and that the grubs do not change to pupae till June and July of the third season, the perfect beetles issuing from the pupae two or three weeks afterwards, but passing the third winter in the pupal cells and emerging the following June. Thus three full years are consumed from the time the eggs are laid until the perfect beetles appear."

STRAWBERRY WEEVIL: (Anthonomus signatus, Say).—The Strawberry Weevil frequently does much harm by cutting off the flower buds, the stem being severed close to the bud. The grub of this insect feeds on the pollen of the flowers and after the female has laid an egg in the bud she cuts the latter off so that it may not develop. The unopened bud falls to the ground and the grub of the weevil developes inside it. There is only one brood of this insect in the year. The beetles appear in August and then hide away beneath moss or among bushes and remain in a lethargic condition until the following spring. The varieties of strawberries chosen by the female for egg-laying are those which produce much pollen, as it is chiefly upon that part of the flower that the grubs feed. Varieties of strawberries which are bearers of pistillate flowers only are not attacked; consequently when the strawberry weevil is abundant, growers will do well to plant a large proportion of pistillate sorts only, using enough plants of perfect flowering sorts as will insure the proper fertilization of the fruit.

As the Strawberry Weevil passes the winter in the mature beetle form, and flies to the strawberry buds just before the flowers unfold, when the work of the weevil is noticed in spring, it would be well, where it is practicable, to cover the rows of perfect flowering plants with cheesecloth until the flowers are well opened. Trapping the beetles, it is claimed, has produced good results. For this purpose, pollen-bearing plants should be planted in rows near the bearing beds, and when these are found to be covered with the beetles, the plants may be sprayed with the whale-oil soap solution, one pound in five gallons of water, or with the kerosene emulsion.

STRAWBERRY LEAF-ROLLER (Phoxopteris comptana, Froh.)—The Strawberry Leaf-roller has not proved very troublesome in Canada, but, occasionally, it does considerable injury.

The caterpillars of this insect fold the leaves of the strawberry by drawing the upper surfaces together and fastening them with strands of silk. They then eat away all the green inner surface of the leaves, giving the beds a brown and seared appearance. The first brood of caterpillars is found during the month of June, when most of the injury is done. There is a second brood in autumn. The caterpillars, when full grown, are about one-third of an inch long and vary in color from yellowish-brown to dark brown or green. The first brood turns into chrysalis in late June or in early July and soon hatches into moths which lay their eggs for the second brood in late July. The larvae of this second brood hatch and attack the strawberry leaves in late summer and early autumn. By the end of September the insect is again in the chrysalis stage in which it passes the winter.

REMEDY.—Spray with Paris green, 4 ozs. to 40 gallons of water, or with arsenate of lead, 3 lbs. to 40 gallons of water, before the leaves become folded. Several applications are necessary, as new leaves are appearing all the time and the hatching season of the eggs extends over a considerable period. Spraying should not be done while the plants are in full bloom, nor after the fruit has formed. If a bed becomes infested, the foliage should be burned, or raked off and burned immediately after the crop is harvested.

CUT-WORMS.—Cut-worms sometimes do much injury in the strawberry plantation, especially the climbing species. They do their destructive work at night and though the injury to the leaves or roots is apparent in the morning, the cut-worms have disappeared. They may usually be found secreted in the surface soil not far away from the plants they have injured.

REMEDY.—Whern either the climbing or non-climbing species is troublesome, or where injury is done to either leaves or roots, the most effective remedy is poisoning with a mixture of bran and Paris green, in the proportion of one-half pound of Paris green to 50 pounds of bran. The bran is slightly moistened before the Paris green is added so that the latter will mix better with it. This poisoned bran, of which the cut-worms are very fond, is scattered on the surface of the ground about the plants.

LEAF BLIGHT: RUST. (Sphaerella fragariae, Sacc.)—This disease does much injury to some varieties of strawberries by reducing the healthy leaf-surface and so lessening the vigor of the plants. When thus weakened, the plants are unable to develop fruit properly, the crop is much lessened and the quality of the fruit is poorer. Fewer and weaker runners are also made Some varieties are much more affected than others and, where this disease is troublesome, those should be chosen which are the least affected by it. This information is given in the description of varieties published in this bulletin. It has been noticed that strawberries are more affected by the leaf blight when grown on sandy loam than on clay. The first indication of this disease is the appearance of round purplish or reddish-brown spots on the leaves during early summer. By the close of the picking season and often during the middle of it, these have become very numerous. The spots, which are at first small, also increase rapidly in size and often coalesce, thus involving a large proportion of the leaf, which finally withers. As the spots increase in size, the centres become white and from this white portion are given off myriads of spores which are carried to other leaves and plants, thus propagating the disease. Later in the season, winter spores are developed from the same spots, but these are carried over winter in small sacs which are attached to the leaf. These sacs do not permit the spores to escape until spring, when they cause the first infection.

Bordeaux mixture will check this trouble if thoroughly applied. In order to control the disease it is necessary to begin spraying just when the leaves unfold in the spring, to destroy the winter spores. A second spraying should be made as soon as bloom has fallen, a third immediately after the fruit has been picked, and, if possible, a fourth later on. New plantations should be sprayed during the growing season at as frequent intervals as are necessary to keep the foliage covered with the mixture.

Some growers burn the foliage as soon as the picking season is over. The foliage is mowed off and then fired. An experiment was tried at the Central Experimental Farm to test the value of this method, twenty-nine varieties being burned, while a similar area of the same varieties was not burned. It was found that when there was an extra amount of litter lying on the rows, the crowns of the plants were somewhat injured by burning. The aftergrowth of the plants burned over was luxuriant and healthy, but rust soon developed. At the close of the season, however, the treated plants were much healthier than those untreated. In small plantations, a good plan would be to mow the foliage and after raking it off, burn it in piles where there would be no chance of injury to the plants.

POWDER MILDEW OF THE STRAWBERRY. (Sphaerotheca castagnei Lev.)—The disease known as powdery mildew is not common in this country, but in one locality in Ontario, at least, it has done considerable harm and, as it may soon spread, it should be referred to here. When this disease is bad, it covers the fruit with mildew, making it unfit for sale or consumption. The grower does not usually notice the disease until it affects the fruit, but as a rule it starts on the under side of the leaves, which eventually curl up, and in order to control it, it must be treated early, as the plants cannot be sprayed satisfactorily when the fruit is developing, although ammoniacal copper carbonate might then be used. For spraying the foliage, Bordeaux mixture may be used or flowers of sulphur in the proportion of one part lime and two parts flowers sulphur. It is important that the under side of the leaves should be well covered and even the soil, so that spores may be destroyed. These are scattered early in the spring from the tiny sacs in which they are contained during the winter. They soon germinate and attack the leaves. As this disease spreads only on the surface of the leaves, it is readily controlled if treated at the proper time.

The Brown-Tail Moth in Canada.

Although the Brown-tail Moth (Euproctis chrysorrhaea), which was introduced into Massachusetts from Europe about 1890, has spread rapidly into the adjacent eastern states, causing great destruction to fruit and shade trees and physical suffering to the inhabitants, and involving an annual expenditure of thousands of dollars, it was not until 1907 that the first winter web of the caterpillars of this insect was found in Kings County, N. S., and sent to the Division of Entomology. This discovery was an indication that the Brown-tail Moth had established itself in Canada. Realizing the serious results that would follow its spread in Nova Scotia, the Department of Agriculture for Nova Scotia instituted a campaign which has been continued against the insect, and many thousands of nests have been destroyed annually in Kings, Annapolis and Yarmouth Counties, which were found to be infested with the insect. This prompt action cannot be too highly praised. Stray specimens of the male moths have been found since 1902 in New Brunswick, but as yet no signs of the insect having gained a foothold have been observed in that province.

Early in 1909 the winter webs, which the young caterpillars spin and in which they pass the winter in colonies of several hundreds, were found in New York State on nursery stock imported from France. The Division of Entomology at Ottawa was advised of this fact and steps were immediately taken to have all European nursery stock imported into Canada carefully inspected for these winter webs, in which stage the insect is most easily distributed but also most readily destroyed. Over a million and a half plants were examined and nearly two hundred winter webs were found on French stock. This inspection which, in the absence of the necessary legislation, was carried on with the voluntary co-operation of the nurserymen importing the stock, is being repeated, and during the present season, which is now closing, over three hundred webs, representing probably several hundred thousand of caterpillars, have been found in more than two million plants inspected. With the co-operation of the Customs Department of the U. S. Bureau of Entomology and of the New York State Department of Horticulture, the Division is advised of all shipments of European nursery stock, and these are inspected at the points of destination. So far as we can judge this careful inspection, in which we have been assisted by the Department of Agriculture of the provinces concerned, has prevented the introduction of the moth in nursery stock in which manner it was first introduced into this continent. Owing to the absence of the parasitic insects which keep it in check in Europe, where it is common but only occasionally seriously injurious, it has spread with astonishing rapidity. Being carried chiefly by the prevailing winds, it has spread northwards into Vermont, New Hampshire and Maine, and is now within a hundred miles of the Canadian frontier. As a result of a thorough inspection of the infested region in Nova Scotia, the writer is of the opinion that its control is possible by a thorough and systematic inspection and the destruction of all the winter webs, and that by prompt action the insect may be prevented from spreading into the forest and wild thickets. The caterpillars feed on hardwoods such as oak, maple, elm, ash etc., in addition to cultivated and wild fruits and thorn. Its establishment in the forests would render control impossible.

Circumstantial evidence supports two theories to explain its introduction into Nova Scotia: the chief means appear to be vessels trading between such ports as Bridgetown, Bear River, Digby, etc., and the port of Boston. One infestation could be explained only by the remarkable fact that the moths are carried across from Massachusetts to Yarmouth Co., N. S., by the wind; this

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has been found to occur, but practically all the moths so carried are males.

This insect presents one of the most serious problems with which the Division of Entomology is and will be confronted. In the Eastern States it was allowed to assume large and uncontrollable proportions before action was taken, with the result that it soon spread over several thousand square miles, and now the only hope lies in the establishing of the parasites which are being imported from Europe, reared and released. Several species have become established, and it is hoped that by these means the insect will be ultimately controllled, by which time, however, it is safe to prophesy that it will have reached and crossed the Canadian frontier.—By C. GORDON HEWITT, D. Sc., Dominion Entomologist.

To Preserve New Potatoes.

It may interest Canadian potato growers to learn that by a simple and cheap method of preserving new potatoes, which has recently been tried in this country, genuiue English grown varieties will hereafter be procurable in winter and early spring at prices which it is stated, will bring them within the reach of the ordinary housewife. Hitherto, new potatoes in the winter months have been looked upon as somewhat of a luxury, but the plan devised is that these potatoes, bought in the height of the cheap season, can be successfully preserved for consumption during the winter months and compete with the supplies then usually imported from abroad.

The method of preservation is extremely simple. Large quantities of new potatoes are bought in August, when the price per pound only averages from two to three cents. These are stored away in tin boxes and buried under the ground. In some places they are placed in silversand as an additional preservative, but this is not essential. Some months later, before their skins are set, they are dug up. A similar process is also stated to be in vogue at Teneriffe, where the potatoes are placed in peat moss litter in boxes and buried underground. When withdrawn their skins are not only tender, but they are claimed to be the equal in every respect to fresh potatoes.

In the process lately tried in England, the potatoes require no attention during the period of storage, and, after being preserved in this way for several months, will be found to be very palatable at Christmas time and in the early spring. It is said that they still wear the appearance of ordinary new potatoes, and, when eaten, seem to have lost but little of their original flavor.

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The Bread and Butter Age,

The growing child needs more good food at frequent intervals than the adult. Nothing is better and safer between meals than a slice of the good home-made bread. Formerly graham or whole wheat bread was favored; but Dr. Woods Hutchinson, the prominent hygienic writer, and other experts, have pointed out that the coarser flours are really less easily assimilated and are inferior in food value to the best white flour.

"Beaver" Flour

is a product uniting the merits of the coarser flours with the delicate, white, appetizing qualities appreciated by children and grown people alike. It is not a crude mixture, but an exactly proportioned scientific blend of Manitoba Spring Wheat and Ontario Fall Wheat. The famous Manitoba No. 1 Hard contains the gluten and proteids which build bone and sinew, and we balance this with the right proportion of the best Ontario wheat, softer, whiter and richer in carbohydrates, to make a perfect food. For bread, cake and pastry, use BEAVER FLOUR.

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Popularity of Box-Packed Apples.

Mr. J. M. Mussen, Trade Commissioner at Leeds, England, Writes:

"One of the most important changes which the past season's trade in Canadian apples has brought to light in this part of England is the greatly improved popularity of box-packed apples. Many merchants now declare themselves to be whole-heartedly in favor of this system of packing apples in bushel boxes. Not only are these boxes, they say, more conveniently stored on the ship, but they are easier to handle in their warehouses, and meet a long felt want in supplying the demands of small retailers who cannot dispose quickly of the large amount of apples contained in the ordinary barrel. Although, of course, the retail price of the apple is slightly higher than that charged for fruit in barrels, yet the attractiveness of the packing and the selectness of the apples themselves is declared to be usually found sufficient to counterbalance any disadvantage in this respect."

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DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Washing Dairy Utensils.

The importance of keeping all dairy utensils clean and sweet needs to be emphasized once more, at this, the beginning of another dairy season. Success in dairying means attention to details. With many dairymen, the "washing up" is not looked upon as being very important and, consequently, is often neglected.

Milk pails and separators should be washed and scalded at least once a day and better every time they are used. For washing, a brush is better than a dish cloth. The latter is not a sanitary article, and is a favorite harboring place for bacteria. A brush can be thoroughly cleaned, but a dish cloth can't, unless it is boiled after using. There are brushes made especially for cleaning pails, cans and separators, and every dairyman should have one.

In washing dairy utensils the first water used should be only lukewarm not hot; on the other hand the water should not be too cold. The work will be done much easier if some alkali powder is used with the water. A little commercial baking soda is as good as any. Put a teaspoonful or two into the water, and it will have a wonderful effect in brightening the pails and cans. Soda may be a little more expensive than some other substances that might be used, but it is always on hand, which is something.

But washing in lukewarm water, even if some alkali substance be added, is not sufficient. If one were to examine through a powerful microscope a milk pail after being thus washed, a whole army of living bacteria would be seen. These need to be destroyed before the cleaning or washing can be said to be completed. The simplest and best way to kill this germ life is to thoroughly scald the utensils in hot water. This will kill all germ life unless the pails or cans have seams or crevices that the hot water will not reach. Some, instead of scalding, will place the parts in a hot oven for a few minutes. This serves the same purpose, but it is not as safe a plan as scalding, as one is apt to leave them in the oven too long, when the solder melts and the utensils become useless.

After scalding it is not necessary to wipe tinware with a dry cloth. If rinsed in scalding hot water the pails will soon become perfectly dry and especially so if exposed to the sun. Sunshine is nature's best disinfectant and germicide. It is darkness and dampness that promote bacterial development, not sunshine. Every dairyman should have a regular drying place on the sunny side of the house and the dairy tinware should be kept there after washing. The parts of the cream separator should be placed there when washed.

J. W.

Use of Fat-Saturated Alcohol to Solve Difficulty.

Prof. E. H. Farrington, of The University of Hisconsin, writes as follows:

One of the important points in testing cream by the Babcock test is to measure the fat accurately after it is separated in the neck of the test bottle. The bottom of the fat column is approximately a straight line, but the top has a concave surface, or meniscus, which often occupies a space of nearly one per cent of the graduated scale on the neck of the bottle.

Considerable discussion has arisen as to whether the fat should be read to the top, the bottom, or to some other point on this meniscus, experiments have been made by the dairy division of the United States departments of agriculture for the purpose or locating accurately the proper point for reading the top of the fat column.

This uncertainty can be entirely overcome by dropping a small quantity of alcohol into the neck of the test bottle after the cream test is completed. The alcohol floats on the fat and changes its concave surface to nearly a straight line. This use of alcohol has long been known, but as alcohol dissolves fat, the practice is not to be recommended, as it reduces the length of the fat column somewhat and therefore gives too low a reading of the per cent. of fat.

USE OF ALCOHOL WITH TEST.

The suggestion has recently been made by Dr. Babcock that this solvent action of alcohol on fat can be overcome by first adding to the alcohol all the fat it will dissolve, and then pouring a small quantity of this fat-saturated alcohol on the top of the fat column in the test bottle. This method of reading the fat in cream testing has been in use for some time at the Wisconsin dairy school with very satisfactory results. The top and the bottom of the fat column appear as nearly straight lines, giving two exact points between which the fat can be measured.

The fat-saturated alcohol is prepared by adding about a teaspoonful of butter fat to six ounces of alcohol in the bottle. Warm and shake the bottle until the alcohol has dissolved all the fat possible; some of it will be left undissolved at the bottom of the bottle. It has been found convenient to remove the fat-saturated alcohol from the bottle by means of a glass tube which extends through the cork to near the bottom of the bottle. By placing a finger over the top and lifting the tube out of the bottle, a small quantity of the liquid can readily be transferred to the cream test bottle.

This fat-saturated alcohol should be used for reading the tests as soon as they are completed, while the fat is still liquid. A little shaking of the test bottle after adding the alcohol will sometimes make the line between the fat and alcohol more distinct.

Bovine Tuberculosis.

Bovine Tuberculosis is costing the United States millions of dollars yearly, not through the actual death of tubercular animals but by the tubercular animals infecting the

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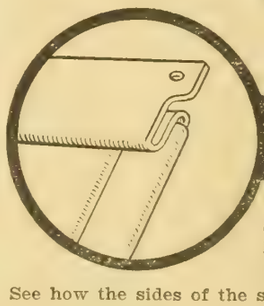

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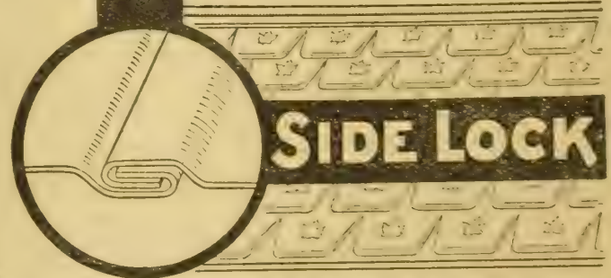

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County..... Province.....

Emerson & Fisher, St. John, N. B., Maritime Province Representative.

The Foolishness of it

Spending hundreds of dollars in building a splendid home or barn and then deliberately allow it to suffer for paint.

Martin-Senour Paint

100% Pure, Preserves

It feeds the hungry open pores of the wood with pure linseed oil, lead and zinc—making the surface absolutely impervious to climatic changes.

It seals wood from dampness—prevents it from splitting, cracking, from sun and frost, blistering heat and blowing dust, which help the processes of decay and ruin. Good pure paint buys more than 100 cents worth of insurance against the ravages of time.

The ingredients of a pure paint are well known. In the main they are Carbonate of Lead, Oxide of Zinc pure Colors, well ground by specially adapted machinery, and thinned with pure linseed oil and pure turpentine dryer.

A building owner who fails to recognize *the great importance of selecting the right paint*, will see his property value decrease while he grows aged and peevish wondering why.

Notify us if your dealer cannot supply you, we'll gladly direct you where our paints can be had.

Refuse All Substitutes

Illustrated booklet, "Home Beautiful," and interesting color card Free for the asking.

The Martin-Senour Co.
LIMITED
Montreal
Pioneers Pure Paint

healthy ones, thereby reducing their actual value.

If all of the tubercular cattle in the United States were slaughtered at once, the balance of the cattle would be worth more than the tubercular and healthy animals together.

It is every man's duty, in justice to himself, to determine positively that his herd is free from tuberculosis. Wiping tuberculosis out of the cattle of this country is too large a problem for a handful of people to undertake and for this reason I contend that we will never wipe tuberculosis out of the cattle of our country until the live stock owners are given the proper information, both concerning the nature of bovine tuberculosis and the tuberculin test. When this information reaches the live stock owner, I am sure that he will be more anxious to wipe tuberculosis out of his herd than any one else, owing to the fact that he is financially interested and he and his family first of all are consumers of the products of his cattle.

Supposing those who do not believe that there is such a thing as bovine tuberculosis or a reliable tuberculin test apply this simple, harmless test to their herd and if they find that there are animals in their herd that have reacted to the test, have such animals placed in one stable and those that passed the test, indicating that they are free from tuberculosis placed in another stable, keeping for their own use the product of the ones that have reacted and pronounced tubercular, and putting upon the market the products of those that have according to this test passed and found free from tuberculosis.

Live stock breeders, think this over carefully and be fair with yourself.

DR. DAVID ROBERTS.

A New Idea

In the West Indies people who have long worn cotton and linen clothing in the hot weather, are now using pure wool homespuns and find them most agreeable. The Hewson woolen people of Amherst, N. S., are developing this trade very successfully. Canadians might do well to wear more homespuns in Summer.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B

Definite Gains From Cow Testing.

Editor Maritime Farmer:—

Mr. A. W. Haine, of Dewdney, B. C., writes as follows:—

"When we joined the cow testing association in 1908 we had 21 cows, aged between 4 and 7 years, with an average yield of 6,800 pound milk. In 1909 our 21 cows averaged 8,360 pounds milk. We have 16 pure breds and 5 grade Holsteins. I would not think of stopping weighing and testing our milk as I feel satisfied that if a dairyman looks well to the sire of his herd, and weighs and tests, his herd is bound to improve, and the hired men take more interest in their work. We commenced dairying 8 years ago with the intention of bringing our cows up to an average of 6,000 pounds milk each, which we did in about five years."

Such statements as the foregoing should prove inspiring to every dairyman. A fairly high standard of 6,000 pounds milk was reached in 5 years, and an increase of 23 per cent. has been added to that. Mr. Haine will probably be up to 10,000 pounds per cow soon. That is one particularly interesting feature of cow testing, ideals are realized, then those still higher are sought for, again with satisfactory results. What excellent herds could be developed if dairymen all over the Dominion would take up cow testing in real earnest.

C. F. W.

1. A cow's return for kindness is profit; for abuse, loss.

2. You have no more right to abuse the cow than she has to kick you.

3. When you go to milk the cows with a club in one hand and a milk pail in the other, you'll come back with little in the pail.

4. You cannot get more butter fat in the milk by pounding the cow over the back with the milking stool.

5. If after you kick the cow, she kicks you, thank her. It is simply a reminder that you have a bad habit, and, worse still, you are teaching the cow a bad habit.

6. As a general rule, when you see a cow kick, make up your mind that someone kicked or struck her first.

7. When the owner passes behind his cows in the barn and the animals fly first to one side of the stall, then to the other, with a wild blue glint in their eyes, make up your mind that the poor animals think that he is only another species of dog.

8. When you see a man step in between his cows to milk them and roughly shove the animal over to the other side of the stall with the yell "Get over, can't you," just watch the cow wind him one across the ear with her tail, and it serves him right.

FORESIGHT

Means Provident Care for the Future.

Is it FORESIGHT to WASTE money on a FLIMSY CREAM SEPARATOR because it is a LITTLE LOWER in PRICE? It may skim for a SHORT TIME, soon GETS OUT of REPAIR and is READY for the SCRAP HEAP in a YEAR OR TWO.

"Care for the future," means, select the STRONGLY BUILT MAGNET made by the CREAM SEPARATOR SPECIALISTS, the

PETRIE MFG. CO., Ltd., Hamilton,

whose GREAT SUCCESS has been attained by building this Cream Separator superior in every way to all other separators.

DO NOT TAKE our word for it, BUT COMPARE it, point by POINT, with any or all separators and you will find EACH PART in the MAGNET STRONGER and BETTER ADAPTED for doing the WORK FOR YEARS than the parts IN ANY OF THE OTHERS.

Here are the points :—

1st The square gear construction.
2nd The strong and rigid frame.
3rd. The double supported bowl. (MAGNET Patent.)
4th. The skimmer in one piece takes out all foreige matter leaving perfectly pure cream.
5th. Perfect skimming, the advertised capacity.
6th. Easy cleaning, clean within five minutes.
7th. Change of capacity in the same stand for a few dollars.
8th. Perfect brake. Saves time. (MAGNET Patent.)
9th Sanitary strainer on tank. (MAGNET Patent.)
10th. Safety. All parts covered
11th. Skims standing on the ground or any floor.

Our GUARANTEE COVERS EACH and EVERY POINT. Send for Catalogue.

Free to every Dairyman. Department E, under the management of a Graduate, will answer all inquiries in regard to Dairying, free.

Our 12 years' experience, as Dairy Specialists, is at your disposal.

Write

The Petrie Manufacturing Co., Limited,

Head Office and Factory—**HAMILTON, Ontario, Can.**

Winnipeg, St. John, N. B., Regina, Vancouver, Calgary, Montreal.

Dairy Notes

Few farmers realize what it costs to be rough with cows.

Make a test and be convinced. Use the Babcock test when the cows are handled quietly and properly, and again when they are yelled at and hurried to the stable.

The loss following rough treatment will astonish most farmers.

A careful milker, quiet in his ways about the stable, is worth many dollars more in a single season than one who is brutal.

There is not a cow, no matter how poorly bred, that will not respond to kind treatment.

The more highly bred she is the more susceptible she is to these influences.

Stinting in the feed will never bring full production and profit.

Never allow a harsh, unfeeling man in the cow barn. It is not possible to give a cow too much care.

Profitable dairying depends largely upon getting cows to eat large quantities of feed.

To do this the feed must be palatable and healthful.

Clean the stables two or three times a day. Try it and see how much better the air will be.

Wall whitewashed stables look cleaner, brighter, and are more healthful than those that are neglected.

A close, poorly ventilated stable may be very cold. It takes plenty of pure air to keep cattle warm.

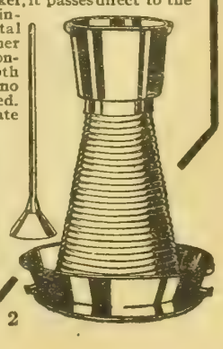
By all means the best way of getting dirt out of milk is never to let it in.

MAKE DAIRYING PAY BETTER

Strain your milk as it leaves the cow, not afterwards, and see that you strain milk only, not milk, dirt and bacteria. You can make pure milk an absolute certainty by using the

STERILAC SANITARY MILK PAIL

Note its clever construction. The funnel is detachable. As the milk falls on the slant towards the milker, it passes direct to the strainer into the pail. All dirt falling into the opening is caught on a deep metal shelf inside the funnel—not on the strainer—thus milk and dirt never come in contact. You can use ordinary cheese-cloth for straining. Capacity 14 quarts, no joints on the inside; it is easily cleaned. Price, $2.50. Used by all up-to-date farmers and dairymen.



PURITY MILK COOLER-AERATOR

Cools milk rapidly, within 2 degrees of running ice water, well or spring water, whichever you use. Rapid cooling and thorough aeration ensures milk keeping sweet for 48 hours and destroys odors. The milk flows through the perforated pail on top on to the corrugated body which ensures the milk running down slowly so that it is perfectly cool when it reaches the retainer pan. There are outlets at each side of this pan. This cooler is well made, has soldered seams, is easy to clean and simple to operate. Will last for years. Price, $6.50. Guaranteed as represented. Write for large catalogue of dairy supplies, FREE.

W. A. DRUMMOND & Co., 185 King St. E., Toronto

THEY THINK You Don't Know

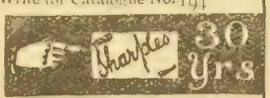
Any one who thinks he can hide from you the fact that disk filled or other common cream separators are complicated and hardest to clean must think you never use your eyes. Any one who tries to convince you that disks or other contraptions are necessary in a modern separator must think you know nothing of facts.

Sharples Dairy Tubular Cream Separators

have neither disks nor other contraptions, yet produce at least twice the skimming force, skim at least twice as clean, wash many times easier, and wear a good many years longer than common, complicated separators.

That is why farmers all over the world call Tubulars "The World's Best", and it explains why Tubular sales exceed most, if not all, others combined and why Tubulars probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries. Write for Catalogue No. 194

Sharples Dairy Tubular. The World's Best.



THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

LIVE STOCK.

Bulls Running at Large.

Farmers who are trying to build up a herd of cattle and who live in districts where bulls are allowed to run at large are beginning to complain seriously. At almost every farmers' gathering in Canada resolutions are passed memorializing the Government to restrict the territory in which entire animals may be allowed to roam.

This action on the part of the farmers is indicative of two things. In the first place, it shows that there is a desire to breed up the cattle stock, and this cannot be done when every scrub bull in the district is allowed to run with the cows. It is manifestly true that, no matter how good the cows nor how good the farmer's own bull is, if his neighbor's scrub bull, or a bull of some entirely different breed, is allowed to serve his cows, his effort at improvement will be in vain. And then a farmer may have his cows enclosed within a pasture fence, which will not stand very long if a bull on the outside wants to get in. This desire for improvement is behind these resolutions for restricting the range of bulls.

This complaining also shows that there is a large element that are not giving much attention to their bulls and the improvement of their stock, else these bulls would not be running out. Of course this does not apply to strictly range conditions, for there it is necessary that the bulls be on the open range during part of the year. It is the farmer with the scrub bull that is not so particular whether the brute is kept in or not. But whoever saw a farmer that had a number one bull and let him run out to serve all his neighbor's cows for nothing? It is the poor bull that is being objected to all the way around, and it is the careless farmer who is letting him out and causing the trouble.

Now there is another feature about this bull business that is worthy of consideration. So long as bulls are given free range, just so long is it going to be impossible to eradicate contagious abortion. A little miserable scrub bull roaming around from one herd of cows to another can do more harm in spreading this highly contagious disease than all the good the whole force of government veterinarians can do in a much longer time. It is doubtful if abortion ever can be stamped out so long as bulls run at large.

In a great many districts there is considerable dairying carried on and consequently quite a few dairy bulls. The beef man hates these bulls like poison and for very good reasons. There is no reason under the sun why dairy bulls should be allowed out loose at all. The cows must be brought home to milk, and it is an easy matter to see when the bull is needed. A dairy bull is a prime essential in the dairy herd, but he is worse than useless for breeding up beef stock. There can be no excuse for letting such run at large.

It seems most unjust to hinder a farmer from improving his stock if he wants to do so, but that is what is being done when bulls are allowed uncontrolled range. The demand for an amended Entire Animals Ordinance is in keeping with the improvement in conditions generally.—N. W. Farmer.

Pure Bred Sire—His Value.

Following is a portion of an information circular recently sent out by the Blue Valley Creamery Co., to its patrons:

How many of you have dairy herds that will average more butter fat per cow than your father's herd did, or perhaps than did your grandfather's herd? Have you made any improvement upon your father's methods of handling his dairy herd? Are you taking any steps to insure the heifer calves you are raising being better milk and butter producers than their dams? If you are using a "scrub" or a "beef bred" sire and hoping to have a herd of profitable dairy cows, your results will certainly not be very gratifying.

The task of building up a profitable dairy herd must begin with the sire. Without a pure bred sire, with the ability to get calves capable of producing milk and butter fat economically, all other efforts to improve your dairy herd must fail. The skillful breeder of any class of live stock realizes the importance of having a properly selected sire to head his herd. The average dairyman, however, gives this important subject little thought and makes use of a scrub sire because of the idea that it is cheaper to do so, or because his father got along all right with a scrub sire and he, himself, has not given the matter much thought. The scrub sire and the unprofitable cow go hand in hand in retarding dairy progress; where you find one you generally find the other. It is not necessary that every farmer have pure bred cows of a dairy breed in order to have a profitable dairy herd for high grades are just as efficient producers.

The following shows very distinctly the rapidity with which the qualities of the sire accumulate in the high grade:

Generation	Blood	Percent. Improved	Percent Unimproved
1	½	50.	50.
2	¾	75.	25
3	7-8	87.5	12.5
4	15-16	93.75	6.25
5	31-32	96.87	3.12
6	63-64	98.43	1.56

This shows very well the truth of the often heard statement, "The sire is one-half the herd." It does

CAPACITY---DOLLARS !

A VITAL POINT FOR THE PROSPECTIVE BUYER.

To clearly illustrate this important question :—

To separate 100 lbs. milk (10 gals.) with a 350 lb. capacity separator, you must operate it about 20 minutes.

To do the same work on a 500 lb. capacity separator it takes but 12 minutes.

You Save 8 Minutes

in time? Yes, but that's not all. In wear? THAT'S IT. Eight minutes in wear every time you separate 10 gallons of milk.

The Capital

is small in appearance alongside of other makes of EQUAL CAPACITY because of its simple yet strong construction and its "easy to wash" bowl, separating 500 lbs. of milk per hour. Weighs less than four lbs.

That's Why.

The National Mfg. Co., Limited,

OTTAWA, Ont. REGINA, Sask. EDMONTON, Alta. MONCTON, N. B.

The Original "HALLOCK" Weeder.

The object of a weeder is to keep down the weeds, therefore, it resolves itself into this one fact: that a weeder should be used early and often, so as not to give the weeds a chance to grow. You will not injure your crops by working the ground directly over the plant or grain, but will do much toward increasing the growth and yield.

You can work them in dry or wet weather, they will not cut the roots of the crop, but cultivate just deep enough to retain the moisture just where it is needed. But, do not forget the old rule—Use the WEEDER early and often, and when you are all through with all kinds of other cultivators, our weeder will finish your job in No. 1 shape. Thousands in use. Write for prices and terms.

Send in your order now for the "HALLOCK" Weeder. Goods are now in hand, all orders will receive prompt attention.

ILLSLEY & HARVEY CO., Ltd.,

Port Williams, Nova Scotia.

MOLASSINE MEAL

is an APPETISER—A DIGESTER and a proved WORM ERADICATOR.

A food for all Horses, Cattle, Sheep, Pigs and Poultry.

—SOLE IMPORTER—

Andrew Watson.

91 Youville Square, - MONTREAL.

Wash Your Clothes In The Easy Way

Wash them in the "Puritan" way. No rubbing—no tired arms—no aching back—no scalded hands and face. Fill The "Puritan" with warm, soapy water—put in the soiled clothes—start the "Puritan" going—and in five minutes, the clothes are ready to hang.

That's the "Puritan" way—the easy way to wash clothes. Make it your way.

Churn your Butter in the easy way with a "Favorite" Churn. 69

Write us if your dealer cannot supply the "Puritan" Washer and "Favorite" Churn. We will see that you are promptly supplied.

DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

GET THIS CATALOGUE

SAVE MONEY

The Best Ever

issued: Guns, Rifles, Ammunition, Fishing, Tackle, Baseball, Golf, Tennis, Lacrosse, Camping Outfits, all Summer and Winter Sports. We want

Every Man

who Hunts, Fishes, or plays any Outdoor Game to get our large free Catalogue. Prices right, satisfaction guaranteed. Immense stock, prompt shipment

You save money by getting Catalogue to-day.

T. W. Boyd & Son,
27 Notre Dame St. West, Montreal

not mean, however, that the same sire must be used throughout the six generations. This illustration is true whether or not a change in the sire is made. With the properly selected pure bred sire used on the common cows found in the average herd, the improvement will be much more rapid and the sire will be a great deal more than one-half the herd. His being pure bred gives him greater power to stamp his characteristics upon the offspring than can the grade cow.

Up-to-date dairymen are beginning to realize the value of pure bred sires in increasing the production of the herd and decreasing the cost of producing butter fat. Do not be afraid to pay a good price for a pure bred sire to head your herd and never buy a sire because the cost in dollars and cents is low, for you will surely realize some day that his actual cost was indeed very great. If he is a sire that will produce daughters that have milking qualities developed to a high degree, the cost should be of secondary importance.

Valuable information as to the importance of the sire in improving or injuring the productive capacity of the herd can be had from a study of the dairy records of the State Agricultural College of Missouri.

By comparing 10 daughters of a sire with their dams, it was determined to what an extent these daughters were influenced by their sire, that is, whether or not they were superior producers to their dams. It was found that 10 daughters of one sire averaged 216 pounds of butter fat yearly; while their dams average 234 pounds yearly. It can readily be seen that this bull decreased the average production of the daughters 18 pounds under that of their dams. With another sire that was used there was no decrease or increase, the herd being at a standstill. Another sire which was used increased the average production of 10 daughters 110 pounds of butter fat per cow over that of their dams. This 110 pounds of butter fat at an average price of 25 cents a pound, would make $27.50 that each daughter earned in excess of the earnings of her dam. Counting on the same basis 30 cows milked six years, we have $4,950 worth of butter fat produced by the daughters in excess of that produced by the dams. You can readily see what the great value of this bull would have been had he been owned by a small association of neighboring patrons. He would have been cheap at $1,000, while the other two bulls mentioned would have been expensive at $10.00 because they left the herd in a worse condition than they found it. There is no question but what many farmers are lowering the productive capacity of their herds every generation on account of their paying no attention to the selection of sires.

Investigations carried on in some Indiana herds by the Indiana Experiment Station showed that herds in which pure bred sires were used were producing butter fat on an average of 3¾ cents cheaper than herds which were ungraded. While the average profit per year from the ungraded herd was $19.62 a cow, that of the graded herd was $36.04 a cow. On a average the graded herd produced 64 pounds of butter fat per cow more than the ungraded herd. There is no question but that the purchase of a pure bred sire would be one of the best investments our patrons could make.

The Cow Due to Freshen.

It is not an uncommon occurrence to neglect the cow which is due to freshen, whereas if proper attention was given her up to this time, she should produce exceptional results. Give her sufficient and proper feed as this will encourage the development of a large udder.

A swollen udder after freshening would indicate that she is a good cow, because it is the large flow of milk which causes the distention of the udder. It is at this period that the average stock owner is apt to err in allowing the calf to nurse its mother, owint to the fact that the calf has a tendency while nursing to bunt the udder, thus causing increased irritation.

Too much stress cannot be laid upon the importance of caring for the udder, it being advisable to apply soothing applications in case same is unnaturally swollen or caked.

A mild tonic is often advisable where there is an unnatural swelling of the udder as it has a better effect than outward applications.

DR. DAVID ROBERTS.

There is hardly a farmer's daughter in Canada who does not know Windsor Salt.

It has been the universal standby for years.

Practically all the prize winners at the fairs have used Windsor Salt—last year, 95% of those winning cash, medals and premiums, made their prize butter with Windsor Salt.

If you have not been using Windsor Salt for butter making, get a sack and try it. You will then see why the prize butter makers use it.

7

Abnormal Appetite.

Cattle with abnormal appetites have a strong desire to lick the walls, dirt and filth that a healthy animal would have no desire for. This would indicate a derangement of the digestive organs.

If animals thus afflicted are neglected they will soon run down in flesh, drop off on their milk, and become a bill of expense rather than a profitable animal.

To overcome this trouble the animal should be given good, clean, nutritious, digestible feed and with same a tonic to regulate the digestive organs.

Oftentimes an animal thus afflicted is disposed of at an unreasonable small amount and if by chance this animal is purchased by one well versed in the care and treatment of such animals, is converted into a profitable animal at a very little expense.

Whitewashes 20 Times Quicker Than by Hand.

The **Spramotor** whitewashes as much surface in **three minutes** as can be done by **hand** in **one hour.** It saves its cost in one day's work.

And the **Spramotor** applies this whitewash more **evenly** and more **thoroughly** than any other method **Known.** It's disinfecting spray goes into all cracks and crevices **impossible** with **hand** work.

The **Spramotor** is easily handled. Swivel castors, on strong wheels, permit it to be turned in any direction.

Simple in construction. Nothing to get out of order. No mechanic necessary to operate the **Spramotor Junior.**

10,000 sold in the last 5 years. 90,000 lbs. (45 tons) paint applied by N.Y.C.Ry. at Buffalo, N. Y. It's worth while to find out about it.

We are anxious to **prove** this to you. So write **to-day** for interesting **free booklet.**

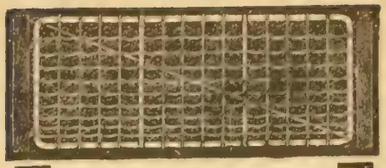
Paint formula and directions with Machine. **AGENTS WANTED.**

W. C. HEARD,

1378 King St., - London, Ont.

Calves **Raise Them Without Milk**
Booklet Free
A. A Archibald & Co., Truro, N. S.

If you have Live Stock for sale advertise in the Maritime Farmer.



12' x 48" DRIVE AND FARM GATE $4.65

From factory to user, freight prepaid to any station in New Brunswick or Nova Scotia on orders of six or more. Constructed of best material; frames 1 3-8 tubular steel welded. No spliced pins or coupling at joints to break. Braces, 3 4 tubular, diagonal brace and filling all heavy No. 9 wire throughout. "Send-'em-back-if-they-re-not-as-represented," is my guarantee. Money refunded—no argument. Order to-day or write for booklet. If in a hurry—wire—write

DYER—THE FENCE MAN
Mgr. Crown Fence and Supply Co., Toronto
He saves you money—buy direct. 4

THE HORSE.

Care of the Horse.

The horse is not only better housed, which has reduced the frequency of respiratory complaints, but he is better fed than formerly. There is still room for improvement—that is, room for better management—because preventable diseases associated with bad or injudicious feeding are still of too frequent occurrence. A lavish adundance or niggardly parsimony in kind or quality of the ailment may be equally bad management. Broken wind, which is most common among farm horses and ponies (both classes of horses the property of notoriously poor feeders), is invariably caused by feeding large quantities of coarse, innutritious, and badly saved hay, or permitting horses to eat their litter. To the unobservant or inexperienced there may appear but little connection between broken wind and inferior food, but there is no bettr way of causing this distressing and incurable complaint than by permitting the animal to take its fill of mouldy or dusty hay, or by habitually feeding it largely on such stuff. Feeding without reference to the nutritious value of the food or its quality, and supposing that when inferior stuff is used deficiences can be compensated for by an extra allowance, will be sure to end disastrously. If farm horses had more corn and less hay, especially inferior or badly-saved hay—which is frequently reserved for consumption by the team, while the better quality goes to market—there should be fewer broken-winded subjects among them. Laminitis — inflammation or "fever in the feet"—once very common, and still frequent in some stables, is invariably associated with dietic errors, particularly with the use of wheat, and, to a more limited extent, of barley as a grain food for horses. There are, of course, other causes, including long spells of idleness in the stable, over driving horses out of condition, and injudicious paring of the feet; but too much grain, and not enough work, both instances of bad management, are the most fertile cause.

WATERING.

Watering is closely associated with feeding; indeed, it forms part of any system of dieting. A restricted allowance of water is a fertile cause of impaction in horses fed on dry food. We have known it to be frequent in stables where water for the horses had to be carried from a distance, the attendance making one bucket do for two horses when they ought to be getting one each. It is by far the best plan to have water always standing in front of the horse, of which it can drink at will, but it must be kept clean and frequently changed. Horses so provided drink relatively less than those watered at irregular intervals. If there are insuperable objections to this plan, then water should always be offered previous to feeding, and the horse premitted to satisfy his requirements. Some horses play with water standing in front of them, and always have their surroundings saturated, and unless the supply and discharge are automatic, there is often negligence on the part of attendants to keep a clean supply. The quantity of water supplied to horses is of some importance, owing to its effect on the digestive and urinary organs. Cold spring water, which is often hard, is not the best for horses, who exhibit a marked preference for pond water, which has been softened and warmed by exposure to the atmosphere. Much depends upon what the horse has been used to, but, taken generally. hard water is bad. That the character of the water supplies has a great influence on the health and condition of horses is well understood—so well, indeed, that trainers of race-horses often go to the trouble and expense of carrying with them, to places where their charges are to run, the water to which they have been accustomed at home. Horses have no particular preference for dirty water, or for that from a pond receiving the drainage of the farmyard and buildings: but they like soft water Water from a clean pond, or well-stored rain water, is decidedly preferable to cold spring water, and horses supplied with the softer fluid look much better in their coats than those getting hard water. If the supply for the stable is from a deep well or underground pipes, the water, especially in summer, should be drawn and exposed to the atmosphere for some time before it is offered.

GROOMING.

In the mind of the stableman, grooming is inseparably associated with appearances. It serves purpose of much greater importance, so far as the health and efficiency of the animal is concerned. It stimulates the skin, removes dead hair, and also the dust and debris that would choke the pores of the skin and interfere with cutaneous respiration. The "grease" in the coat of the horse that is running out and feeding on grass serves a useful purpose in affording protection, and it is a good plan to refrain from grooming for several days the horse that is to be turned out; but the stabled and highly corn-fed animal needs grooming and plenty of it, to keep it in health and condition. Some diseases of the skin of the extremities—notably mud-fever, cracked heels and grease—have an intimate connection with stable management, and are invariably associated with the close clipping of the legs in winter and washing them on return from work and leaving them wet. These troubles are best avoided by clipping Irish or hunting fashion, and adopting the dry system of cleaning now practised in the best hunting stables.

Treatment for Balky Horses.

One of the most trying experiences in the training industry is to have a horse balk when asked to move a load well within his ability, says the Horseman. A horse that possesses a balky temperament is never safe in emergency, and the driver is always anticipating trouble with his charge. The incorrigible balky horses of the rural districts find their way to wholesale markets, where, under the test of hauling a heavy truck wagon on a paved street, with the wheels blocked, the vice is immediately discovered. If the animal has been sold as serviceably sound, and guaranteed a willing worker and cheerful puller, the buyer rejects his purchase and the horse is re-sold without any guarantee except clear title of ownership. Some horses have learned to balk by being overloaded and abused. Their courage has been overtaxed and they rebel disheartened at the task they are asked to perform. Other horses appear to balk from natural inclination and appear foaled full of innate stubborness. Balking, like wind-sucking, cribbing, weaving and halter pulling, is a vice developed by natural inheritance. In breaking young horses to harness too much caution cannot be observed in asking the youngster to pull light loads to begin with. Balkiness is an attribute of equine meanness that when it manifests itself is sure to appeal to the evil disposition of the teamster. To know that a horse is well, has been humanely treated, and is only asked to perform that which he can do easily and have him refuse to do it naturally incites a driver to punish the animal. Beating a balky horse does not appear to reform him from the vice, When exhibiting a demonstration of his balky disposition, the horse appears to be immune from the pain of punishment and stands beating without flinching. The animal appears to be under the influence of a spell, in which he would rather die than obey the voice of his master. The balky horse cannot be conquered by brutal treatment, but may be induced to pull by many devices intended to attract his attention from his resolution not to pull. To lift the forefoot and pound on the shoe, to put a handful of grass or dirt in his mouth, to give him a lump of sugar or an apple to eat have all proved successful in some instances in inducing a horse to pull. To pass a cord around the pastern and pull the forefoot forward until the animal has to move is also a means of starting a balky horse. An electric battery manipulated by the driver gives an animal a shock from a source that he does not comprehend and is the latest device in treating incorrigible horses.

In buying a horse always select one that appears intelligent and tractable. The "mean, ornery-looking cuss" is generally just as mean and "ornery" as he looks.

It would be an excellent thing if the idle stallion were hitched up and used to haul wood or wheat. The ideal way to treat a stallion out of service is to put him in harness and work him at ordinary work daily, and feed him as a work horse. The stud horse in this country is treated too much like the rich man's sons, too much indulgence and idleness for their own physical good. Both would be better for a little work.

North Dakota has a new stallion enrollment law. We have not seen it in full, but it demands that all parties standing or using stallions in that state for public service shall have the same registered by the newly created stallion registration board at the Agricultural College. All stallions must undergo a veterinary examination by an inspector appointed by the board. We would suggest that our own horse breeders' associations secure copies of this new law and see if there are any good ideas in it that we could adopt.

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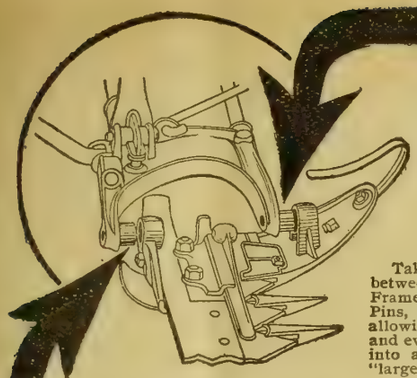

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Smith's Falls, Canada

POULTRY.

Summer Egg Production.

We have been accustomed in the past to look upon egg production in the winter time as the most important feature of the egg business, but now the high price of eggs and the increasing demand for the same causes us to turn our attention to other periods of the year.

Egg production throughout the year might be plotted in a curve. It starts low down in November and December, rises to its height in March and April, in the natural hatching season, and falls off gradually throughout July and August until it practically ceases in the latter part of September and October. The only way to overcome the deficiency in the fall seems to be by the hatching of very early pullets. This is not practical for the farmer. He can, however, improve production in the summer and in the following lines we will endeavor to show how:

FIRST—THE STOCK.

Of course, we desire to have pure-bred stock. There is no excuse for anyone keeping a mongrel flock at the present time. The question of stock is not quite so important for summer work as it is for winter work, yet it is important. For the latter it is absolutely necessary that we have early hatched, fully matured stock, but for the former much of that stock that was not mature enough for winter work will be available for summer work. It does not as a rule keep it over, yet there is much of it in the country.

SECOND—THE HOUSES.

In the early days the hens roosted outside in the trees and laid when and where they pleased. We must provide them with light, airy, clean, well ventilated quarters. The curtain front house does this if properly tended. In the south it is often the custom to remove the roosts from the back to the front when the warm weather comes on, or a series of double roosts may be provided allowing the hens to choose for themselves.

The most important feature in summer egg production is cleanliness In many, many instances it is the presence of filth, insects, and disease that drives the hens out of doors. The houses must be kept clean and cool. The droppings must be cleaned out regularly and the litter must not be allowed to become damp and sour. Dropping boards should not be used unless they can be cleaned off every day. Where no dropping board is used, cleaning twice a week will do but oftener would be better. It is a good plan to scatter clean, fresh soil around where the droppings will fall, for soil is an excellent deodoeizer and disinfectant. When allowed to remain too long the accumulated droppings dry out and become excellent breeding places for lice and mites.

The litter on the floor is of importance. Straw or marsh hay may be used and should be used if it can be readily procured, but it becomes dirty quickly. Some use shavings or soil, but these are not very satisfactory if it is intended that the grain be fed inside. The house should be whitewashed. It makes the house much brighter, and light is one of the best disinfectants we have. Some object to the dust, but the dust is what is wanted. Lice and mites breathe through pores in their skin, and the most effectual way to combat them is to clog up those pores with dust, oil, etc. This is why whitewash is used on the walls and the oily disinfectants on the roosts and nests.

The drinking utensils, the troughs, the hoppers, the nests should all be kept clean. The nests must be cleaned from time to time and plenty of clean, fresh hay or straw added. Much profit is lost to the farmer by having dirty nests. The hens refuse to lay in them, the eggs are lost. With no litter in the nest many eggs are cracked or broken, their contents smeared over other eggs, and the nest material made foul and dirty. Such will taint the eggs every time and load them with bacteria which cause early decay.

THIRD—THE FEED.

The question of the feed is important. The amount of corn in the ration should be reduced in warmer weather. More wheat and oats may be used, preferably a little of both if market prices will allow. The hard grains may be fed on a clean piece of ground outside. Some continue to feed in the litter in the summer, which is good if the hens are closely yarded.

A dry mash should also be placed before them. It may be hopper fed and good results obtained. It may consist of varying amounts of several ingredients, but one composed of the following will give very fair results: 2 parts bran, 1 part corn meal, 1 part middlings, ½ to 1 part linseed meal, and 1 of beef scrap. It is well also to supplement the dry mash with an occasional wet mash, say from two to three times a week. A meat mash made thus: Boil some cheap meat till it is well broken up; take an ordinary 12 quart pail, place in it about 2 quarts of corn meal, pour the boiling liquid slowly over it. Stir till the meal has taken up all the moisture it can, then add about 3 quarts of bran and stir. It may take more in which case add bran until the whole has a consistency of brittle dough. If the birds have free range (and it is preferable that they should, for no one can get the best results from a bare yard), the use of beef scrap and green food will not be so necessary. If the birds are yarded some provision must be made for green food. Rape is very useful for this. If handled carefully and only the outer leaves removed, it will stay green and succulent for a considerable length of time. As a rule it is wise to supply birds with some shell forming material and grit even throughout the summer months. If they do not need it, they will not eat it.

The birds must have water. Watering once in every two or three days will not do. They must be watered daily with good fresh water placed in clean dishes. The dishes are apt to become slimy and ill-smelling. They should be scalded and rinsed out from time to time. The place where the water pail is set is important. It should not be set in a house where all sorts of dirt will fall in. It should not be placed in the sun where the water will become hot. The birds like a cool refreshing drink as well as a man, and the water should be placed in a cool, shady place.

FOURTH—SHADE.

Birds do enjoy a shady place in summer under the trees, in a raspberry patch, in an asparagus patch, or in the corn. They seem to enjoy a low thick shade the best, and if it is convenient either their house should be moved to the shade or the shade should be brought to them by planting the above mentioned crops.

Some one will say, yes, if we do this our birds will lay in such a place. They will not lay any quantity there if one provides proper quarters within doors. A clean, cool house, well ventilated, free from lice and mites, darkened nests with clean fresh litter in them, broody hens removed and shut up (nothing breeds lice so fast as a bunch of broody stuff, fresh water in clean dishes, and hens continually sitting on the nests), plenty of cooling food, range and green, a nice cool, convenient shady nook in which to spend the hot parts of the day. If people will but do this, take pains and have a sympathetic interest in those fowls, gather the eggs regularly, discard the cracked and dirty ones, keep the eggs in a cool, sweet place and market them often, they will get more eggs, they will get better prices, their eggs will become known in the community as pure, fresh and as germless as it is possible for them to be.—Professor W. A. Brown, University of Maine.

The poultry house should be frequently cleaned. The dropping boards should be sanitary and the hay or straw used to line the nests should be frequently changed.

Don't breed from any hen, duck, turkey or goose which has ever been seriously sick, even though it may seem to have recovered.

Nothing worries a sitting hen so much as lice, and she should be dusted once every week with some lice killing powder to kill the pests. In so doing, be sure that her plumage is filled to the skin.

There are many breeds and all have their merits. He has the best breed who gives it the best care and aims to secure the most good out of it. Feed, in this particular, has a great deal to do with success.

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The Unruly Member.

BY MARION HARLAND.

(Continued from lastissue.)

"Had you addressed your dissuasions to me, sir, my course might have been very different," replied Horace, with a searching glance at Cora. "I acted upon the impression that I had your cordial approval of my venture, and this mistake led me to greater lengths than I originally purposed."

"It was a mistake, and a singular one," said Mr. Manning. "Why, Cora, you—where has the child gone? I was about to say that she could have set you right on that head. There is no use lamenting over what is done and cannot be remedied. I am an intruder here, tonight, to say to you, my dear fellow, that my confidence in you remains unshaken—that I have not even the charge of imprudence to bring against you. You were a little precipitate, but that is of no consequence. Men of twice your years and experience commit greater blunders, are guilty of greater rashness every day." Here the old gentleman began to stammer and look embarrassed. "And furthermore, Horace, if you do not get well out of this quagmire, if all that you have goes by the board, I stand ready and able to help you to regain your place—an honorable one it is, too—in the mercantile world. Moreover" —hesitating yet more woefully— "don't make yourself wretched—that is, unhappy; I mean uncomfortable—with fancying any alteration in certain arrangements. You understand? I commenced life—my married life, ahem?—when I was pretty near the foot of the ladder. It's by far the best way."

This was a long speech for worthy Mr. Manning, yet Horace had no language, at its close, with which to thank him. Deeply affected, he wrung his hand, and his moistened eye and quivering lip told of gratitude too great to be articulate.

When Cora re-entered the room, he was alone and more composed. Into her ear he poured his acknowledgements to and praises of her father.

"But how strangely you misconceived his sentiments touching this luckless business!" he remarked, presently. "They appear to have been exactly the reverse of what you understood. How do you account for this?"

"Either I was dull or so perverse in my ideas of the subject that I did not and would not comprehend, or he is forgetful," answered Cora, readily.

And this was the woman who, not two months previous, had avowed so proudly, "To him, at least, I am no dissembler!" The broad, shallow steps of harmless evasion, unimportant exaggeration, and pardonable equivocation had prepared her slowly, but how surely, for sudden and deeper plunges into falsehood. The Father of lies appreciated his tool, and was master of his art. Horace had not the meagre satisfaction of knowing how full and remorseful was her participation in the trial of feeling and threatening of pecuniary loss that oppressed him. He saw that she suffered, and from some cause beyond his power to cure; and this begot in him additional care at a season when his uneasiness was already sufficient to crush the spirits and energy of an ordinary man.

While matters were in this state, he had a call from Dr. Merrill. This devoted man of medicine rarely stepped aside from the routine of professional life, unless incited to the extraordinary measure by business of an urgent nature. Upon this occasion, before seating himself, he broached the subject of his errand. Horace's amazement was profound when the theme was prefaced by his sister's name, and it grew apace when he discovered that a serious complaint was entered and sustained against one whom he had ever regarded as a model of discretion. But as the recital proceeded, he perceived, from his prior knowledge of the circumstances, that, if she had spoken more freely than was altogether consistent with prudence, she had said nothing unadvisedly. The Doctor's charge was to this effect: that Miss Miller had stated and reiterated publicly, as a fact, his ignorance of Constance Remer's danger, when every labored breath was throwing out the death-dew upon her brow; had reassured her friends, and, through them, the doomed patient, when they expressed solicitude at the result of her sickness; had allowed her to pass into the eternal world unaware, and without the last mournful privilege of saying "Farewell" to those who would always lament her silent departure.

"Now, sir," concluded the irate physician, "I never said that the girl would probably recover. I have not practised medicine—with some indifferent skill, as even my enemies grant—for twenty-five years, not to know consumption when I have to deal with it, hydra-headed though it be. I gave up all hope of the case in point before I had paid half a dozen visits at Mr. Remer's. You do not require to be told how far short I should have fallen of my duty, if I had openly proclaimed my conviction, and advised the parents not to waste more money, physic, and pains upon their idol. Until the world is as wise as doctors, we must work on, with what semblance of confidence we can assume, while the vital spark quivers in the body. But do you not see in what a light people will eye the physician who is as much the dupe of appearances as they are themselves? It is a mortal sin in him to mistake the slightest symptom. He ought to foresee the end from the beginning, in the most complicated malady. Is he not paid to do it? I never exchanged a syllable with your sister upon the subject of the deceased illness, nor do I guess who was her authority for the statement she has circulated of my judgment in the case. There was one who could have told her a totally different story, and the evidence of this person I am prepared to adduce at any moment. The afternoon preceding Miss Remer's death, I imparted my impressions—my certainty, rather—of her actual condition to Miss Cora Manning—"

"To whom?" exclaimed Horace starting from his seat. "I beg your pardon! Did you say Miss Manning?"

"I did. Chancing to encounter her on my way home, after the last visit I made Constance's sick chamber, I answered her inquiries as to her friend's health in the most candid style I could command; told her in so many words, that she was near her end; that it would not surprise me if she did not live through the night. She was shocked, of course, so visibly overcome that I had to warn her against betraying her alarm to its object, pointing out the evil effects of such useless revelation at that late hour. She acquiesced in my prudent suggestion and I left her at Mr. Remer's door. It is impossible that she should have forgotten the substance of our conversation. If you demand her evidence, I trust that she is enough my friend to afford it, at my request."

"It is unnecessary—quite superfluous," rejoined Horace, hastily. "I have heard all I want, and more."

Commanding himself by a strenuous effort, he pledged his word for the contradiction, and, if practicable, the suppression of a report so detrimental to the Doctor's professional pride and interests, and they parted amicably.

The wave that tears the breach in the dyke prepares the way for the surge of its mightier and more disastrous successor. Horace still sat over his neglected ledger, his head resting upon his hands, buried in the painful train of thought forced upon him by Dr. Merrill's communication, when a letter was brought to him. As he broke the seal mechanically, another missive fell from within it. He read the first. Gossips are proverbially thick-skinned, or magnanimously indifferent to the pickles they rub against in their quest after the truth, which, we may remark, in passing, is seldom "the whole truth," and still more rarely "nothing but the truth." Miss Healy's sensitive spirit made her an exception to the general law of imperturbability. She "had her feelings," she was fond of saying. Those who were acquainted with her idiosyncrasies hinted that she had her spites also, and that this class of emotions often reached a pitch of virulence and obstinacy exceedingly unbecoming in so public-spirited an individual, the pretended dispassionate benefactress of the community blessed in being her abiding-place. Horace had fairly earned a share in her rancorous recollection. Stung to the quick by his open disdain for her, as exhibited at divers times and in sundry places, especially and most offensively at Mrs. Williams' soiree, the aggrieved spinster had sought through her well-supplied arsenal for an instrument of torture that might suitably avenge her for the indignity offered. His love for his betrothed was his most vulnerable point, and this chimed in well with her inclination, for Cora, albeit several degrees less obnoxious than her lover, was by no means a favorite with this fastidious lady. In Fred Williams she found a not unwilling accessory to her plot of humbling both the haughty Horace and her who had, to the gentleman's notion, displayed inexcusably degenerate taste in receiving the devotion of his rival. The ci-devant beau had, fortunately for the success of their machinations preserved one memento of the juvenile engagement which, the reader may not be astonished to learn, had once existed between himself and Cora Manning. This souvenir, whether accidentally overlooked in the return of letters at Mr. Manning's command, or with-held purposely, was evidence unimpeachable of the fact and the character of said connection. It was nothing less than a letter penned in Cora's own hand, addressed to her boy-gallant, and glowing with all the inconsiderate ardor of a love-lorn maiden in her sixteenth year.

This was the effusion which Horace Miller's burning gaze now scanned; its every line branding with the grossest deceit and direct mendacity the being he had worshipped as near akin to angelic natures. Galling as its phrases of undisguised tenderness were to his proud, delicate spirit, this was as nothing in comparison with the blighting conviction that his idol was the basest clay—one for whom his pity must be mingled with contempt.

"If she had but told me! if she had owned the truth, were it a thousand times more humilating, I would have loved her all the same," he groaned to his sister, that night; "I said to her when I made inquiry about this early folly—for it was only a folly, Ellen—the fanciful dream of a sentimental school-girl. The whole sin was in its concealment, in the premeditated deception of him who hid nothing from her. I have not deserved this at her hands."

Ellen was much moved, but less surprised than her brother; the scales had not fallen so suddenly from her eyes. Feeling that all might as well be told; that the wisest and most merciful policy towards the sufferer was to complete his disenchantment by abundance of testimony, she related her story. To her, the scene in which Cora and Mary Chester had acted such different parts was but the commencement of similar developments, the key to incidents hitherto inexplicable, each illustrative of this heinous defect in the disposition and conduct of the misguided girl.

And thus Cora Manning lost lover and friend, gaining in their place a memory replete with wretchedness and shame unavailing; the blind commiseration of those cognizant of

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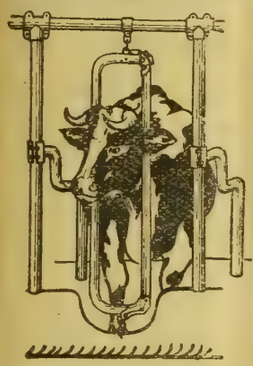

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the punishment, and not the sin; the displeasure and distrust of the few whose esteem she most valued; the lasting reprobation of him concerning whom, and in whose behalf, she had sacrificed more of truth than for any other cause or creature besides. For was it not to screen their loves from the profanation of vulgar remark, that the lie of policy slipped from her tongue ere she was alive to its formation in thought? that she might shine brighter, stand higher in the respect of him and his, was not the tinsel lie of vanity paraded? to spare him a feather's weight of vexation, an atom of added care, had not the lie of affection been earnest and repeated? to escape his anger, to retain his love, was the lie of fright a whit less plausible and convincing than the rest? Truly, her labors had been neither few nor small, and here was their reward! The fly in the ointment had fulfilled its mission, and the once exulting possessor of the precious casket flung it from him with sorrowful loathing.

Would that the tale were all fiction, or that it treated of the only golden phial thus polluted into a rank offence to those who, in this age of gaudy coloring, and intense refraction, still cherish, as one of the holiest of sentiments, a genuine Heaven-commanding love of TRUTH, for itself and as it is.

THE END.

Jacassa's Journal.

By Mary W. Janvrin.

May 30th.

My name is Jacassa Selina Bowen; I am twenty-four, and unmarried; I am "literary"—that is, I have earned something of a reputation by writing for the magazines and popular light literature of the day. I was worn, physically, by my long winter's toil in the busy city, and I have come down to board and spend a quiet summer in this pleasant seaside, yet country farming-town of Ryefield. I shall not write much here, I opine; rather will I resign myself to the luxurious influences of nature which woo me to a luxurious, dolce far niente sort of laziness, I need as a reaction to the busy, brain-tensioned past. I feel, already, years younger than I did when I came here, and I have been in Ryefield but three weeks yesterday.

There is a positive refreshment in the very air around the farm-house, to say nothing of the quiet comfort of its scrupulously neat interior. The house is old and rambling, but well-kept, and unlike most country houses in general, has a long porch in front, covered with a luxuriant trained honeysuckle; and in the front yard, good Mrs. Hull tells me, by and by will bloom "daffies," and ladies' delight, and "pinnies," and poppies and hollyhocks. The entry is spacious, and the staircase is wide and turns with abrupt angles at every broad stair. On one side, below, is the closed parlor, with shuttered windows, a carpet with "set" figures, a long, wide old-fashioned sofa, a table placed exactly under the gilt-framed looking-glass, between the two front windows, chairs ranged around rather primly, and a mourning-piece and profile hanging the mantel. But I do not sit often in this room, though motherly Mrs. Hull begs me to go where I like and "feel at home," for the closed windows give it a sort of close, musty smell. Instead, I often bring down my sewing, of an afternoon, into the large, sunny, pleasant sitting-room, with its cheerful chintz lounge and comfortable rocking-chairs, its bright homespun carpet, green asparagus-plumes and hemlock-boughs in the fireplace, the tall eight-day clock in the corner, and the polished hun-

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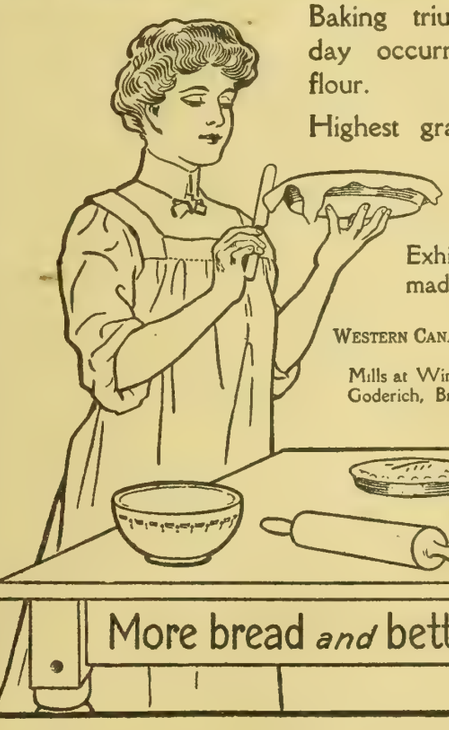

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dred-legged table, whereon I had placed a few of my books in addition to the family Bible, "Baxter's Call," and the "New Hampshire Gazetteer," which lay there, and the high mantel-shelf, ornamented with a pair of bright brass candlesticks, and a trio of gayly painted plaster images ranged after a fashion whereof I read once in and old story—"a parrot, a puppet, a shepherdess"—"a parrot, a puppet, a shepherdess."

The long kitchen, extending the whole length of the rear of the house, save the buttery at one end, is a marvel of neatness, from the carefully scoured and sanded threshold of the back door to the red tiled hearth whereon Mrs. Hull stands on baking days, before the open-mouthed, glowing brick oven, to superintend the incomings and outgoings of the great loaves of cake, the batches of pies, and countless drop-cakes which find their way to her bountifully spread table, for my hostess serves me no meagre fare—stale bread, superannuated cake, the "fossil remains" of last week's steak converted into minced pies, nor the beverage yclept coffee faintly colored with feeble chalf-and-water cream, such as one must be content with at city boarding-houses.

Then, my own room is the spare chamber over the closed parlor, and the embodiment of my idea of comfort. To be sure, the smothering bed of live geese-feathers, which I tumbled to the floor, and good Mrs. Hull bore away, after my first night here at the farm, savored of rather too warm a welcome; but the snow-white valance and fresh dainty pillow-slips, the long dimity curtains swaying to and fro in the breeze that comes in through the raised window from the blooming apple-orchard below, the little round table upon which I have laid out my portfolio, writing-desk, and books, and where I am writing now; the great china pitcher crowded with pink and white apple-blossoms, whose fragrance is more delicate than Lubin's vaunted extracts—do not all these bring a vision of rest and comfort to the eyes that have long been used to the crowded city street and high brick-and-mortar walls?

And then, too, away beyond the acres of white bloom in the apple-orchards, beyond the green meadows and the farthest dark belt of forest, I catch a glimpse of the blue sea—the fresh, the beautiful sea that always brings me an inspiration! The sea and the forest! Byron never wrote two truer lines than these:—

"There is a pleasure in the pathless wood,
There is a rapture on the lonely shore!"

I have spent afternoons, in the long bright Maytime, among the woodland paths over yonder, gathering the fragrant pink and white trailing arbutus, the frail wind-flower, the pale anemone, and dark, glossy wintergreen; and often, when Farmer Hull harnesses his black horse for a ride to the vicinity of the beach, I beg for a ride; and while he talks and bargains with the fishermen, I walk along the ehge of the curling breakers, breatning the strong, damp sea air, watching the sea-birds dip their wings in the creamy foam, then stretch away over the waves, or gather white cockle-shells or brown "sailors' rattles" from the bare sand.

"I wish I could live on the beach," I said, the other night, to good Mrs. Hull, as I came home from one of these rides with her husband, standing and holding my hat by the strings, at the dairy door, where she was "setting" the evening's milk. "Yes, I do; I wish I owned a house right there on Boar's Head, where, all night long,

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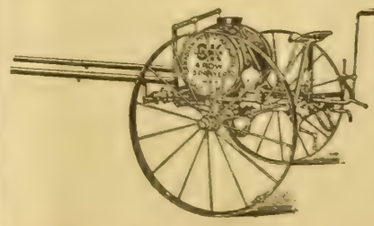

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stormy nights, I could hear the solemn music of the waves beating against the foot of the cliff."

"I rather guess you'd begin to feel kinder solemn yourself, a-layin' awake two or three sich nights, and be a-beatin' round for some place where you could git a good comfortable night's sleep, Miss Jacassy," good-humoredly said Mr. Hull, who had overheard my remark, coming into the kitchen for supper.

"Oh, I'm sure, Mr. Hull, that the ocean would never weary me," I replied, deprecatingly; "I could listen to its voice forever. You don't know—" But I checked myself there, for I couldn't tell him why I dwelt so constantly on thoughts of the sea. "I shall be sorry when the time comes for me to go back to the crowded city again, never to look upon the sea, save the harbor crowded with ships, never to feel the lonely calm and rest of the quiet sandy beaches."

"Come, come, Miss Jacassy, you you forget mother's nice supper's waitin', and your ride ought to a' gin you a right sharp appetite. As for your goin' back to that stived-up city ag'in, I've my notions ag'in that, too, and ruther guess mother and I'll have to adopt you. Hey, mother, what do you think on't?" as Mrs. Hull made her appearance from the dairy. "Keep you as well as not, out here on the farm—no gals nor nothin' of our own, and 'Lisha, he's off a-lawyerin' in Bostin. I declare you have picked up right smart and rosy in jest these three weeks you've been here, and I don't know 'bout lettin' you go back to git pale and pindlin' ag'in." And the farmer kindly stroked my head as I sat down to table.

I could not eat much of the savory edibles the good man and his wife pressed upon me, for the emotions that swelled in my throat. I had met so little kindness these latter years of my life—there were so few who loved me—that the honest affection of these simple people made my heart very tender.

When I left the kitchen, at the close of the meal, I overheard Mrs. Hull remark to her husband: "Somehow, her talk about the beach puts me in mind of 'Lisha; he allers spends half his time down to the shore, when he comes home, you know, Amos. Now, I dare say she'll go and write a piece of po'try or something about it, and it'll read beautiful when it's printed."

Later, that evening, when I had come down to sit with Mrs. Hull, she brought from the parlor a daguerrotype-case and placed it in my hand. I opened it. I do not know that there was anything peculiar in the face that met me save that it was frank and manly in expression; but the eyes had a depth and a certain clairvoyance, if I may so speak, that seemed to read my own thoughts in mine.

"It is 'Lisha's picture," said Mrs. Hull, with a pleased motherly expression in her countenance. "He brought it for a present, last summer, when he came home. And it looks jest like him—jest so pleasant and good! He ain't handsome; 'Lisha never was; but he's a good boy, Miss Jacassy! I shall allers call him boy, I b'lieve," she added, smiling, "though he's—lemme see, 'Lisha must be twenty-seven, this spring. They say he's gettin' to be a great lawyer, off there in the city. Maybe you've heard of him; his pardner is Cyrus Harlow; they're 'Harlow & Meredith.' "

"I have heard of the firm," I answered. "You must be very happy in your son, Mrs. Hull," I said handing back the minature.

"Son! La, bless you, Miss Jacassy, haven't I told you? Why he's Amos's nephew, his youngest sister's child. But theo we took him when he was only seven—all alone in the world, an orphan—and he seems jest like our own. Amos wanted to make a farmer of him; but, somehow, the boy took to his books. And so I told Amos 'twant no use to go ag'in natur', and, if we had plenty of this world's goods, and the farm brought in more'n we ever should know what to do with, we'd better give 'Lisha a college education, and we did."

"But had you never any children of your own, my dear Mrs. Hull?" I asked.

She did not answer; but the hand that held the minature trembled and snapped the spring suddenly. She left the room, and presently returned from the parlor with one of the profiles, cut in paper, which I had noticed in the little gilt frame over the mantel; and, when I turned to look upon it by the flickering lamp-light, I saw a tear upon the glass. The outline was that of a youthful face, plump and rounded.

"This is all I have left of poor Mary, except some of her hair in my bureau-drawer up stairs," she said, in a husky voice. "It was taken years ago, before minatures were invented. She died when she was only seventeen; it was over twenty years ago. Oh, Miss Jacassy you don't know how that blow took hold of our hearts, Amos's and mine! He can't speak about her to this day without cryin', though nobody'd call Amos Hull a soft-hearted man. It was our trouble that first opened our hearts to 'Lisha, I suppose. Deary me! I hope, if you ever marry and have children of your own, you'll never have them taken from you! Nobody knows, except them that lost 'em, the loneliness of a sorrow-stricken mother's heart. I like to have young people in the house," she added, returning from the parlor, whither she went to replace the profile on the wall—that simple outline of features which, though mingled these twenty years with the grave-mould, still conjured to the mother's gaze a vision of her dead and gone seventeen-year-old Mary. "I like to have you here, for it seems like having Mary with us again. Somehow, you put me in mind of her every day; your laugh sounds jest like hers; though my poor Mary wasn't accomplished, and didn't have such great talents as you have, and couldn't have made a verse of po'try to save her life. But she was a good girl, and would have been a sight of comfort to Amos and I in our old age, if she'd a lived." For the good woman did not seem to think that her Mary might have left her for another home; to her she was still the seventeen-year-old girl whose pleasant laugh and smile cheered the farm-house. A sight of comfort! but God took her, and he knows what's for the best! 'Lisha now, he'd like your po'try and writings, I dare say," she continued, in a more cheerful vein, " for he's allers readin' some book or other when he's at home. I do hope he'll be at home this summer, if he don't stay long enough to go down to the beach; he seems kind of bewitched with the sea, and, if he comes while you're here, he'll carry you there as often as you want to go."

"Yes, indeed! and then you can pitch a tent there, and live till you're tired," said farmer Hull, good-humoredly, coming in then from his out-door duties. "But look here, mother, I got some nice fresh fish down to the shore, this afternoon, and we'll have 'em fried for breakfast. Miss Jacassy's better begin to larn to like fish, if she's goin' down to live by the sea."

I have written all this here be-

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cause it pleases me, the honest, well-meaning kindness of these good people; and it pleases me, the life of quiet content I am leading here in this season of rest. I shall try to put off all thoughts of the future and live in the present; to enjoy all and everything that comes to me, the fresh air, the birds and flowers, the woods, and the sea. I will lay aside my pen, now; but I may write more some other day.

June 15th.

I like to talk about myself in my journal, as I talk about other people on paper; so I will sit down, this soft, rainy, June day, while there is a cool, pattering sound among the leaves of the great elm at my window, and write out—as I do for my heroines—a history of my life.

I have hitherto written nothing here of my antecedents, save that I am twenty-four, and unmarried, I am "literary," and my name is Jacassa Selina Bowen.

"'Jacassy!' Where upon earth did I get that name?" honestly queried farmer Hull, the other day; and I will answer here, and more at length, too, than I did him then.

"'Jacassa!' Where upon earth was a Southron by birth; though I have no memory of her save of a beautiful, pale face lit by dark eyes of unnatural brilliancy, as she leaned against the back of her sick-chair, while colored nurses watched her, and my father leaned over her tenderly. This was in the early morning twilight of my childhood. She died soon after. I remember I wept passionately when they told me; and my father brought me back to his native New England home, to the care of his maiden aunt, Miss Selina Bowen, who, with nobody to love or cheer her loneliness in her old-fashioned mansion, received me into her heart and home, adding her maiden name to my patronmic, with the proviso I suppose, that I was to inherit all her worldly goods and possessions at her decease. I do not remember much of my father save that he possessed an erect, martial bearing, and used to gratify my girlish fancy by sometimes arraying himself in a fine uniform, for he was an officer in the American navy. When I was only six, he was summoned from his long furlough into active service; and, kissing me good-by, he resigned me to Aunt Selina. From that voyage my father never returned. A coup de soleil smote him on the deck of his

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vessel in the Mediterranean, and he died shorly after. When the government ship arrived on our shores, a bulletin of his death reached us in lieu of himself, whom we fondly expected. It was weeks before I—a ten year-old child—could mention him without a burst of tears; but afterwards, in the cheerful life of girlhood, my violent grief was subdued. I think, though, it was in those days that I began to cherish my intense love and yearning for the sea. Before, I had thought of it only as the great water whereon my father's ship sailed; but, from the time they brought the news of his death, I thought of it as his grave. We did not live near the coast—Aunt Salina's little estate was inland—but I used to go into the garret, and, seating myself at the window looking eastward, gaze away to the dark blue belt of the far horizon and fancy it the ocean, with every white speck of cloud drifting there a floating ship. So sharp the picture outlined my mental retina, I saw the snowy sail and tapering spars—the deck where my noble father walked in his officer's uniform, with the star on his breast—I saw the great, red, fiery sun wheel high above his head, the angry darts that struck him, his fall to the deck with his hand to his head—the sailors bearing him down into his state-room—the slow lingering—the death—the burial at sea—all this passed before me, distinct as the features of a panorama. Then when Aunt Salina's voice summoned me to some light task or duty, I would bear away with me the same pictures to be thought of till nightfall and dreamed of in my sleep.

And at school, too, while the other children drew pictures on their slates, or played at "tit-tat-too" when the teacher's back was turned, or the boys aimed paper bullets at some fly-target on the ceiling, I would turn the leaves of my Olney's Atlas till I came to the map of Europe, and, guiding with my finger an imaginary vessel's track along the Mediterranean, then threading her way through the narrow Gibralter pass, up round sunny Portugal, and into the wild Biscayan Bay, "here," I would wisper under my breath to some confidential schoolmate, "just here in the Bay of Biscay, my father died, and the sailors tied a round shot to his feet and buried him in the sea!"

The sea! Henceforth it was a sacred shrine to which my heart was ever turning. No wonder I looked upon it with intensest yearnings—it held my father. Some would have said I should have thought of it but with terror and dread; but not so; I loved it. I used to believe that when the sailors lowered him down, in his bright uniform, and the great green waves parted to receive him, the mermaids took him in their long beautiful arms, and sung to him as they carried him down to their coral bowers; and I loved to fancy that one of them might have worn the face of my own dear mother. It was a childish belief; but it gave me infinite satisfaction.

But I will now write of other things. At fourteen, Aunt Selina sent me away to boarding-school. The dear old lady had but little book-knowledge herself, but she was pleased that the grand-niece of her care should have every advantage. I was tall at that age—as tall as I am now; and I had my mother's eyes.

At regular intervals for three years I went home on vacation visits; but I think I really enjoyed myself better at school with my books and companions than at the quiet mansion where Aunt Selina lived in her staid, though comfortable way. I was a favorite with all the girls at the seminary. There was one, Elsie Wentworth, my roommate, with whom I was very intimate. I think all young people—girls and boys in their teens—have what may properly be termed "a Platonic age", when all the poetry and sentiment of their natures come tumbling uppermost, effervescing like new root beer; and I suppose I was in mine then, for I fancied Elsie Wentworth and myself "congenial." We read poetry together, exchanged rings and locks of hair, and vowed eternal friendship. (En passant, it is over five years now since I have seen her!) I mention her particularly here, because, as you shall see presently (I am so used to writing for the good public that I fancy the "reader" must be somewhere behind the curtain), through her I first opened the chapter in my life I am now going to relate.

I have already said I am "literary," but not, like Byron, did I "awake and find myself famous," it came gradually; but there was a dim prescience of my future occupation in my school girl days. A poem, one of the many written in a pink-rose, sentimental mood saw light in The Young Ladies' Repository and Casket over the unique signature of "Jacassa," eliciting the admiration of all the seminary girls; but when, one day, Elsie Amantha Wentworth—I write her name in full—brought me a number of the Yale Literary and Scientific Magazine, published monthly by a class of juniors at Yale, confidentially imparting that her brother, Montague Livingstone Wentworth, was editor—when she brought me this and showed me "Jacassa's" poem copied, with complimentary remarks by the editor on "the fair and accomplished young authoress, who, if we mistake not, will make her mark" (query: her x mark?) "on the future song-literature of her land; giving evidence thus early of having quaffed from the Parnassian spring:"—when I

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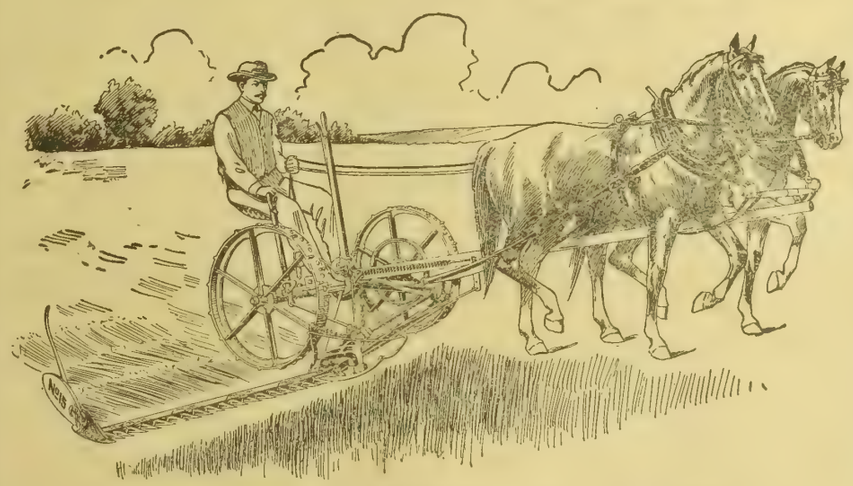
409

Massey-Harris Mower.



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Sections have hard edge and soft centre.

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Mrs. John Pelch, Windsor, Ontario, writes:—"I was troubled with a nasty hacking cough for the past six months and used a lot of different remedies but they did me no good. At last I was advised by a friend to try Dr. Wood's Norway Pine Syrup and with the first few doses I found great relief and to-day my hacking cough has entirely disappeared and I am never without Dr. Wood's Norway Pine Syrup in the house."

The price of Dr. Wood's Norway Pine Syrup is 25 cents per bottle. It is put up in a yellow wrapper, three pine trees the trade mark, so be sure and accept none of the many substitutes of the original "Norway Pine Syrup."

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Also, students can get more attention than in winter, when our rooms are crowded.

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All For The Best.

"A little of life to worry,
A little of life to sing,
A little of wintery weather,
A little golden spring,
A little of life to struggle,
A little of life to rest;
And whether of one or the other
It is all for the best."

A Comfortable Farm.

When the early grass is springing
In the pastures on the hills,
And the nesting birds are singing
In the bushes by the rills,
And the orchard buds are swelling
Under springtime's gentle charm,
It is pleasant to be dwelling
On a comfortable farm.

When the summer breezes blowing
Gently sway the golden wheat,
And the time is near for mowing
Timothy and clover sweet;
When each one delights in giving
Help to save the crops from harm,
It is pleasant to be living
On a comfortable farm.

When the autum fields are browning,
Corn and fruit all gathered in
All the labor, richly crowning,
Filling barn and crib and bin,
Then there comes the time of pleasure
Peace and rest for mind and arm;
Then you know you have a treasure
In a comfortable farm.

When your winter fire is burning
On the hearth so bright and warm,
And the pleasant sounds of churning
Mingle with the howling storm—
When you hear the wild winds chiding,
But your heart feels no alarm,
Then thank God you are abiding
On a comfortable farm.

Brightening Up the Old Place.

The brightening up of a shabby farm yard, or set of farm buildings, does not depend entirely on the paint pot and brush. See what you can do with a few tools; the rake, hoe, hammer, pruning saw, and a few plants, or seed. Then if you can paint, by all means do so.

Rock piles and rubbish heaps are unsightly and it is not necessary that they should be so. In winter, nature covers them up, but in the spring she uncovers them again, and it looks as if she were reminding you that it was your turn next. Why not follow her example?

Throw some soil over the stones and rubbish; then some dressing, and a little more earth, and on one heap plant tall nasturtiums. An old leaky pail set into the heap near the top, and filled with water, now and then through the hot, dry weather, will help make the rubbish pile a thing of beauty. On another heap, should there be more than one, plant the delicate little Arabis (rock cress), for a border around the base, and then over the entire heap plant portulacas in mixed colors, and the mass of color will be beautiful, or if you prefer usefulness to beauty, plant squash seed.

If there are rough stone fences near the house, they may be made beauty spots by planting hollyhocks, golden glow, or phlox in front of them. If you like vines better, the wild cucumber vine (Echinocystis); or the variegated hop vine will produce a pretty cover. If in this case too, you prefer the useful to the beautiful, you will find the Japanese cucumber, or the scarlet runner bean, good climbers and very pretty.

If there are no shade trees near the house, and no piazza, make a trellis frame, no matter how rude; cover three sides with poultry netting, and plant vines on all three sides.

The top may be covered with a piece of canvas, if no regular roof has been provided. It may be made

You Can Afford to use 40c. Tea Just as Well as 30c. Tea if You Use 40c. Red Rose

A pound of 40c. Red Rose goes further than any 30c. or 35c. tea and it is distinctly superior in quality.

30c. and 35c. Red Rose Teas are good teas, so good that very many people say they want nothing better. But, if they would once try a package of the 40c. Red Rose they would use nothing else in future

Just think, five cups of 40c. Red Rose Tea will only cost 1c. One lb. makes over 200 cups. Not a question of affording.

RED ROSE TEA "Is Good Tea"

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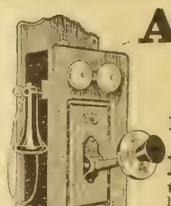

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We have purchased several hundred Swiss Army Rifles. They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game, etc. No one living in the country should be without one of these rifles. Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

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Be sure and work the horse

No salve in the world like Bickmore's Gall Cure for common horse ailments. Don't try unknown remedies. Bickmore's Gall Cure is standard everywhere. Cures galls, sores, cuts, wounds, grease heel, etc., without losing a single day's work. Sold everywhere by local dealers who are directed to refund your money if it fails. Send direct for trial package, enclosing 2c. postage.

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Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 10th, 1910.

Charlottetown Exhibition, September 20th to 24th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

"SILVER PLATE THAT WEARS"
Select Your
Spoons, Forks, Knives, etc.
with care, if you want each piece perfect in artistic design and finish. If the trade mark

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is stamped on the designs you are sure of getting the highest grade silver plate made.

In buying Coffee Urns, Baking Dishes, etc., ask for the goods of

MERIDEN BRITA CO.

Louden's Hay Tools

Have been in use for more than forty years. Each year the demand for them has grown until they are now used from coast to coast, and the best advertisement other makers use for their goods is that they are

As Good as Loudens

We manage, however, to keep the lead we have always had and to manufacture the best line of Hay Tools ever offered to the Farmer.

This is one of the 13 different Hay Carriers we make

Louden Junior Carrier for Steel Track

Write for catalogue and prices to

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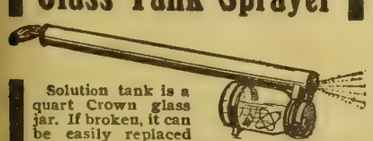
Manufacturers of Hay Tools, Barn Door Hangers, Feed and Litter Carriers, Cow Stalls and Stanchions, etc.

EUREKA
Glass Tank Sprayer



Solution tank is a quart Crown glass jar. If broken, it can be easily replaced for a few cents. Solution tubes are brass.

None of the liquid used can be drawn back into the pump chamber, thus the chamber and valves are uninjured.

This is the easiest operated and the most effective small sprayer on the market. Inquire of your hardware dealer.

Write for our complete catalogue of Sprayers and Garden Tools.

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Woodstock - Ont. 6

large enough for the hammock, or just large enough for a couple of chairs and a stand on which "mother" can rest the dish, while she snaps the beans, or hulls the berries, and in the afternoon, it will be handy for her sewing or book.

On the Spoiling of Children.

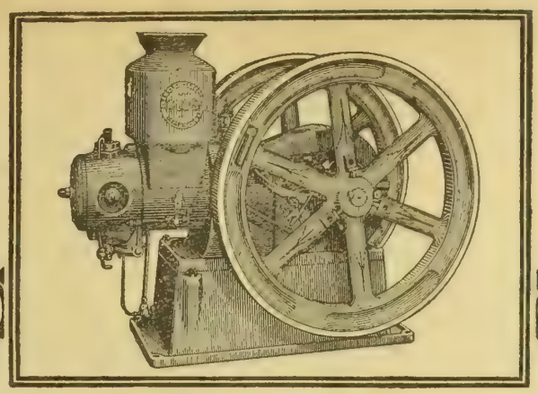
Teachers are almost invariably the object of bitter criticism, much or most of which is wholly unjust, and almost all of which could be avoided if parents would take the time for personal investigation. Most men are unable to get away from business during school hours, and mothers won't take the trouble. Was there ever a boy or girl, not under dicipline, whose eye did not light up with pleasure at the sight of a parent entering the school room? Was there ever a teacher who did not welcome a visitor who came not to blame, but to learn what was going on? It is ignorance of conditions which is responsible for much of the fault-finding. The real faults are seldom mentioned.

The truth is, we parents are selfish. We are neglecting our children and trying to salve our own consciences by blaming others. No matter how much money is spent, no matter how good the system of administration adopted, we are not going to get very far unless parents take hold and do more of their proper share of education. In reality the teacher is only the parent's helper. It is not wholly an ideal condition to have children in school at all. The home is where they should get their best education, and where they ought even now to get the most of it. The school of today is a rather crude invention for accomplishing the greatest good to the greatest number, and it is of value only as we supplement its work at home. That is where the trouble arises.

But while we are selfish, we are an affectionate people. We spoil our children. We let them do pretty much as they please, in reasonable limits, so long as they do not bother us. The intelligent parent who spends ten minutes a day with each child in loving discussion of matters which interest the latter is not likely to have much trouble. to say that the majority do not. Some parents do this, but it is safe Isn't the teacher hired for that sort of thing? But it is not wholly from a lack of time or inclination. In these days parents seem to have a feeling that they are not very good advisers for their own children, and have a sneaking hope that the schools will make up their own deficiencies. Until such conditions are changed there is going to be no improvement. From "What is Wrong With Our Public Schools," by Joseph M. Rogers, in April Lippincott's.

Putting Away Winter Clothing.

Among the many duties which demand the housekeeper's careful attention during the spring season few are more essential than the proper cleaning and putting away of winter clothing. There is nothing better for keeping the articles in through the summer than stout muslin or paper sacks and pasteboard boxes, which may be lined with paper and the cover and openings sealed together with strips of cloth pasted carefully over them. Then, too, it is best to enclose with them some strong repellant. The brushing given the garments or furs before they are put away does the greatest good, for if there are eggs already on the clothing a vigorous shaking and careful brushing is sure to remove them. If there is a piece of soiled woolen cloth left in the wardrobe or closet it will attract the moths and then they may ruin some nice article. Remove every article from closets and wardrobes and scrub every inch of the woodwork with hot borax suds, as this cleanses perfectly and then it purifies and disinfects, and when the wood is dry wet with spirits of turpentine. If there are any grease spots found on woolen articles that are to be washed wet them thoroughly with the turpentine. Leave it on for several hours, then rub between the hands and wash the garments in strong borax suds. This suds is excellent for washing the woolen blankets. After washing any woolen article through this suds rinse through two or three waters with a little borax in each, as all woolen articles washed in this way are left as soft and clean as when new. In fact, there is nothing better than borax and turpentine for keeping moths out of the house and away from all woolen articles. A good way to keep rugs or carpets free from moths, is to clean them thoroughly, then take a paint brush and brush all around the edges with the turpentine. In storing the woolen goods strew bits of soft cloth soaked in turpentine among them. This keeps insects away as well as the moth balls and the odor is not so disagreeable as that left by the moth balls. M. A. H.



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YOU can learn engine facts you really should know before deciding on your gasoline engine.

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1. Removable water jacket—may save you $100.00.
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Tell me what you need an engine for and I will assist in selecting the proper size. Write the nearest office.

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Seager Engine Works,
LACHINE - - MICH.

Using Rhubarb.

About the first thing that comes to our gardens in the spring is the rhubarb. It should be used more freely than it is because of its medical qualities. It is claimed that it not only aids digestion, but it is a foe to rheumatism and gout, neutralizing the uric acid in the system. Because of its health giving qualities, it is an aid to the complexion when freely eaten. There are so many ways of serving it, the housewives should avail themselves of recipes, and study out others for themselves.

Rhubarb sponge is an old dish. Line a dish with slices of stale cake, pressing them firmly around the side, then fill the dish with stewed rhubarb that is not too wet, sprinkle with sugar, cover top with more slices of cake, cover with a plate, weighted down for a few hours, or until the cake has entirely absorbed the juice. Serve with a nice custard. Stale bread may be profitably used instead of cake.

Clean, but do not peel, the rhubarb cutting into quite small pieces; put in an earthen dish, or porcelain-lined and as much sugar as wanted; set the dish in a moderate oven and let cook slowly until done. Very little, if any, water should be added, as the stalks make plenty of juice. Rhubarb cooked this way can be put into glass jars as soon as soft and sealed for later use.

Rhubarb Pie.—Wipe the stalks but do not peel; cut into half-inch pieces; lay in a pie-dish and sprinkle plenty of sugar over it; use but a very little water, cover with a nice crust-dough, and bake in a hot oven for half an hour; serve hot.

As the season advances, rhubarb may be made into jelly, marmalade or jam; or it may be canned with cold water—no cooking; or it may be canned after heating until soft in an oven. Jelly is better made later in the season, when the plant is not so tender and juicy, as it will require less cooking.

"BANK SHARES BOUGHT AND SOLD.

American Securities Co., 627 Confederation Bldg., Toronto.

Constipation is the root of many forms of sickness and of an endless amount of human misery.

Dr. Morse's Indian Root Pills,

thoroughly tested by over fifty years of use, have been proved a safe and certain cure for constipation and all kindred troubles. Try them.

25c. a box.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Construction of Wharf at Shediac, N. B.," will be received at this office until 5 00 P. M., on Thursday, May 26, 1910, for the construction of a wharf at Shediac, Westmorland County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department, at the office of E. T. P. Shewen, Esq., District Engineer, St. John, N. B. Goffrey Stead, Esq., District Engineer, Chatham, N. B., and on application to the Postmaster at Shediac, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, with their occupations and places of residences. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, made payable to the order of the Honourable the Minister of Public Works, for the sum of two thousand one hundred dollars ($2.100.00,) The cheque will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender,

By Order,
NAPOLEON TESSIER,
Department of Public Works,
Ottawa, April 26, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

MUMFORD BROS.
PRODUCE COMMISSION MERCHANTS
MUMFORD'S BUILDING, ARGYLE ST.,
Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly. Halifax prices sent on application TELEPHONE 1905.

read this, then, indeed, I began to imagine that the "divine a—atus" was surely mine by right.

"Oh, Jacassa, you must see my brother Montague!" said Elsie. "He's splendid! Such an airMso distingu! just like a novel hero. I do wish he'd come here—how the girls would envy us him! He wears his hair long, and Byron collars, and he dotes on 'Childe Harold!' I know you and he would be congenial! You see I've written him all about you; and what do you think, darling?" and, with a mysterious air, she took from her pocket a little pink note, redolent with jockey-club, and superscribed in a delicate, running chirography:—

"To
THE FAIR JACASSA.
Helicon's Fount.
By Pegasus's Express.

And this was the commencement of my acquaintance with montague Livingstone Wentworth, this pretty, flattering note, worded so faultlessly and interspersed with poetic quotations—a snare set by a heartless sentimental college fopling, to entrap a silly-headed, equally sentimental school-girl.

(Continued next issue.)

Physical Strength and Mental Keenness.

Few of us appreciate the tremendous influence of the physical body upon one's general mentality. The mind is credited with such a vast influence over the body as to be actually able to cure serious chronic ailments, and I am firmly convinced that it does possess such a power in a few instances. The value, for instance, of cheerfulness and hopefulness can hardly be too strongly emphasized. The value also of a strong determination to accomplish certain results is rarely properly appreciated. I am fully confident that the influence of the body upon the mind is almost equally as great. In other words, a diseased body cannot possibly create that particular quality of blood which is necessary to thoroughly nourish the brain. Therefore, the brain, and the entire nervous system are affected by this impoverished nourishment. Even when every effort of the mind is made with a view of counteracting influences of this kind, you can well understand that the mind would not have the same power as if it were supplied with a different quality of nourishment. A weak body, for instance, cannot endow one with strong determination. The weak body usually means a weak will.

It is clear that any effort that might be made for the purpose of thoroughly developing the body in all its parts, will also enable one to secure rich rewards from a mental standpoint. With a more powerful body you are endowed with a greater degree of mentality. You will have what might be termed more mental force. You will have more "driving power" behind you mental efforts. Your conclusions will be more firmly fixed and you will be more capably equipped to fight for them in the arena of existence.

Retaining Youth.

Whether you are forty or fifty, or even seventy, you can be young. You can actually secure the return of youthful powers. Of course, this cannot be accomplished in a day or a week. But those who are passing or who has already passed into old age can be promised renewed youth.

Do not bother for a minute about the theory of germs in the intestines as the cause of failing bodily powers. To be sure, diet may have a great influence in shortening one's life, but it is not germs in the intestines

A MAN'S BOOK.

A PRIVATE TREATISE, WITH ILLUSTRATIONS, RELATING TO DEBILITY, ITS CAUSE, EFFECT AND HOME CURE.

Let Me Send It to You FREE.

Here is a little volume of cheer and helpfulness which all men young or old, can read with great profit; it contains much valuable information of a private nature, is fully illustrated, and represents the practical knowledge I have gained from forty years of actual experience in giving help to upwards of 100 000 enfeebled, nervous, discouraged men. Just a postal card with your name and address and the book will be forwarded free, sealed, by return mail and with it, as well, I will enclose a full description of my new 1910 model Electric

Health Belt.

If you need new strength, this wonderful appliance must appeal to you. It generates a pleasant, exhilarating currant instantly felt, though it can be made any degree of strength from mild to strong by simply turning the needle of the current regulator; worn nights while you are sleeping, it pours quantities of health-giving, soothing electricity into your sick, weak nerves; you get up mornings feeling bright, strong, full of courage and ambition; it takes all the weakness and pain out of your back; it is a great remedy for your kidneys, bladder, stomach, liver and other vital organs; it cures rheumatism in all parts of the body; it is a courage-giver of the highest order; it brings new strength where weakness exists; it will restore you to vim, rigor and true manhood as sure as night follows day; it makes you feel young and look young; you will live longer for its use; you can throw away all drugs and commence to live as Nature intended you should—a man among men, healthy, happy and vigorous. I can send you thousands of testimonials if you care to see them. Here is a sample Cure:

"Your Health Belt cured me of Nervous Debility, Lost Vigor, Kidney and Bladder Troubles after all else failed.
"CHARLES L. SNELL,
"Middleport, N. Y."

In all instances I concentrate the full positive current at small of back; it thus enters the system at the nerve and vital centre,

passing thence through the different weakened organs, giving them new life and force. You can get the Belt.

ON TRIAL UNTIL CURED

or for cash at a discount, just whichever you wish. Send your address on postal or fill in coupon; or, call at my office, if you live in or near this city. Advice concerning your case will be cheerfully given without charge or obligation.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs—Please forward me your book as advertised free.

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Improved Automatic Compressed-Air Sprayer

Best Hand Sprayer made at the price. An absolute necessity for every farm and garden. Will repay its cost in one season, for potatoes alone. Saves time, labor and material. A boy can do the work. Will run automatically for 6 to 10 minutes. Fitted with our Cant Clog nozzle, it is unexcelled. Drop us a card for Descriptive Circular of our 1910 model and Spay Calendar.

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9 Main Street, - - GALT, ONT.

PLEURO-PNEUMONIA AND BRONCHITIS

Brought Mrs. Baker to Death's Door. Father Morriscy's No. 10 Saved Her.

Of the many hundreds of cures wrought by Father Morriscy's No. 10 (Lung Tonic) few are more remarkable than the saving of the life of Mrs. John S. Baker, of 164 Rockland Road (North End), St. John, N.B. She wrote on Oct. 16, 1909:

"I wish to express my gratitude that I am living to-day, saved from the grave by Father Morriscy's No. 10 (Lung Tonic). This time last year I had pleuro-pneumonia and bronchitis, and had been given up to die, and had my lungs tapped in the City Hospital, and never expected to walk again; I was continually getting worse every day. I came home from the hospital, and everyone was watching fo me to die. I tried everything but there seemed to be no cure for me.

"I began taking Father Morriscy's No. 10, and the second day I could eat without pain. I used 22 bottles of No. 10, as I was run down right into consumption, and for six months was just a shadow until I began to use it, and now I am in good health, and surprised most of my neighbors by gaining so quickly. I feel it my duty to publish it everywhere I can, as with all I can say I cannot recommend it too highly—it was a life saver to me, and I am very thankful to recommend it, as it is worth all it is said."

Father Morriscy's No. 10 is very different from the many preparations that simply relieve a cough. No. 10 relieves the cause of the cough, restores the membranes of throat and lungs to a healthy condition, and tones up the whole system, giving strength to resist future attacks.

Trial bottle 25c.—regular size 50c. At your dealer's or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 92

Irish Cobbler, Triumph, Green Mountain and Delaware

Choice SEED POTATOES

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Cor. Queen and Westmorland Streets, Tel. 111-31.

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A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painfull or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Welancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. Wy book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box m 309, Windsor, Ont.

that actually cause decay. It is simply and solely the harboring of dead cells. Now how can we get rid of these cells? There is only one way to entirely eliminate them from the body and that is through the activity of the muscular system. Do not pay the slightest attention to that senseless twaddle to the effect that when you are fifty or sixty years of age you should cease all physical effort. Conclusions of that kind are simply the maunderings of vapid brains. Activity means life. Activity is always a part of youth. To liven up and make youthful the tissues throughout the entire body, every muscle of the body must be brought into thorough activity at fairly regular intervals. It is not necessary for you to make laborious work of your exercises. Make them as pleasurable as possible. But you must not for one moment divert from the main conclusion that to retain the suppleness and activity of youth every part of the body must be used. It does not make a great deal of difference what system of exercises you may adopt so long as you give reasonable attention to the necessity for spinal strength. In fact, many recreative exercises can be used in order to bring about the desired effect.—Bernarr Macfadden.

The Teeth And How to Brush Them.

Always brush the upper teeth from the gum down and the lower ones up. Brushing them across is said to loosen them, and besides it does not cleanse the teeth so effectively. By brushing the teeth vertically, from the gums up or down, as the case may be, the bristles remove whatever may be lodged between the teeth.

The under side of the teeth must be treated even more carefully than the surface, for neglect will allow the tartar to gain a firm hold thus making professional service for its removal a necessity.

The choice of a tooth brush is of more importance than is generally supposed. Choose a brush, the bristles of which are not too stiff. as hard bristles are apt to cut the gums, which sometimes causes serious mouth sores. Those with uneven bristles are superior to the ordinary brush. The raised bristles at the end of the brush enable the user to get into the "cups" of the broad teeth used for crushing the food, at the back of the mouth. Particles of food find these teeth good resting places and as a result we find that it is nearly always these teeth in which cavities first appear.

Hints on Massage.

Massage, to be effective, should not be given without having previously bathed the face with hot water so as to open the pores and soften the skin; in which state it readily receives the nutriment contained in the cream or oil with which it is massaged.

After a thorough massage, the flesh is, of course, softened, and an astringent is necessary to close the pores and give firmness to the skin. This prevents the formation of surface wrinkles. Cold water is a good tonic and should be used plentifully. Among other good astringents are camphor water, white wine and tincture of benzoin, ten to twelve drops of which are enough for a basin of water. Another good astringent lotion is made by pouring one-half pint of white wine vinegar over one ounce of dried rose leaves; let this stand for a week, then strain, and add one-half pint of rose water; apply it by dipping a soft cloth into the lotion and wiping the face with it, or add one tablespoonful of the lotion to a glass of rain water and wash the face.

Facts About Diseases of Children.

There are, of course, numerous causes for the intestinal diseases from which children most frequently suffer. As a rule, however, they are due to overeating, improper food or partially masticated food. The fermentation of the contents of the stomach and intestines under such circumstances often produce poisons that are inimical to life and health. The nervous system naturally recognizes the presence of this foreign material, and endeavors to eject it, and the symptoms that follow as a result of this endeavor, indicate the presence of intestinal disease.

In the majority of cases intestinal troubles in children are brought about through the use of unripe fruit, decayed vegetables or other impure foods, although irrating medicines are sometimes liable to cause unfavorable symptoms. Chronic constipation will in many cases produce disease, because of the poisons that are frequently created by this unnatural condition. A blow or strain may sometimes cause catarrh of the bowels. In a few instances extreme exposure when the constitution is debilitated, congestion of the heart, kidneys, or liver may also cause intestinal troubles. The reason for these symptoms is that the poisons which cause these diseases find lodgment in the bowels. Imperfect mastication and indigestion are also fruitful sources of these troubles.—Bernarr Macfadden.

Brantford Roofing

passed the experimental stage many years ago

FULLY fifty per cent. of the concerns manufacturing ready roofing have come into existence during the last few years. Their products are therefore in the experimental stage. Their brands have not been in use long enough to determine their actual value.

Now, Brantford Roofing passed the experimental stage many years ago. It is made by a company which was one of the "pioneers" in the roofing industry. It has a record of many years of satisfactory service behind it. It is worthy of your FIRST consideration when selecting a LASTING roofing material for your home or barn.

On request we will send you a list of those who have roofed their buildings with Brantford Roofing in your locality. Then you can see and learn for yourself how satisfactory Brantford Roofing has proved with your neighbors.

You have your choice of three styles of Brantford Roofing—ASPHALT (silicia finish), RUBBER (smooth finish), CRYSTAL (mineral surface). All three styles have a 99 per cent. pure Asphalt saturation.

Get our Free Roofing Book and Samples. Then choose the style you decide is best adapted to your particular job.

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BRANTFORD, CANADA 21

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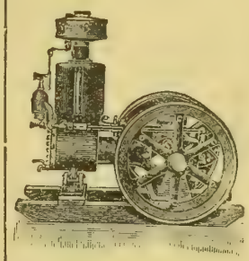

The 'Stickney'

is known from the Atlantic to the Pacific because it is the farmers favorite. ***So Simple.***

No Pipes and Separate Tank always in the way.

Strong and Heavy—Means hard work.

Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

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Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.

G. J. Barrett { Sales Agent } 82 Dock St. St. John, N. B. Branch at Fredericton, N. B.

Cabbage Salad.

Two large raw eggs well beaten, six tablespoonfuls of cream, one-half teaspoonful salt, six tablespoonfuls of vinegar and a small piece of butter. Put on the fire and cook, stirring constantly until quite thick. Have a half head of cabbage chopped fine, sprinkled with salt. Add to the dressing when cold two tablespoonfuls of cream and pour over the cabbage.

Putting Away Woolens and Furs.

Many a housekeeper packs away her furs and woolens with fear and trembling, not knowing what may be their condition when they are unpacked in the fall. In many cases there certainly is reason for this fear because the articles have not been thoroughly cleaned. If moths or their eggs are left in the folded articles, there is sure to be a large colony of larvae, which will eat their way through the woolen and fur articles in the vicinity. On the other hand, if closets and other receptacles are made absolutely clean, and then treated with some insecticide, and if the garments are made perfectly free from insects and their eggs, the housekeeper can go away away with an easy mind.

When ready to put away furs, feathers or woolens, have some clean sheets or cotton bags. For garments that are to be hung up, the bags are better than sheets. Have the closets or boxes made clean as directed. Brush the furs, and shake well. Hang in the sun for several hours. If you have a suspicion that there are eggs in the furs, comb each piece of fur well. Pin the articles in the sheets, and on the sheet pin little wads of cotton batting, dampened with oil of cedar. Paint the joining of the boxes with oil of cedar, then line with paper. When the box is full, cover with paper, put on the regular cover, and put away in closet or storeroom.

Feathers and woolen garments are treated like furs. I am sure that if these instructions are followed, no kind of insect will appear in either closet or box. The odor of oil of cedar is very strong, but passes off in a few days when there is thorough ventilation. Of course, it is important that this odor should be retained in closets and boxes, and for this reason they must be closed tight. Oil of cedar makes a reddish-yellow stain which is hard to remove; therefore it should not come in contact with the clothing. The sheets used should be kept solely for packing purposes.—Maria Parloa, in Ladies' Home Journal.

Feeding the Sick.

I would like to place in every household a discourse of how not to tempt the invalid. I would like to impress every person with the necessity of giving the digestive organism a complete rest while suffering from acute disease. This rule must be followed if one expects to recover speedily, and without needless suffering. Disease is prolonged, the system is weakened, and death is far more liable to ensue, if this policy is not adhered to. Let the invalid wait for an appetite, let this desire for food be strong and even intense, and when he can enjoy every morsel, then, and not until then, is he really ready to assimilate food of any kind.

Do not tempt a reluctant appetite. Do not force the stomach to digest food for which it has no need. Thousands of suffers have been sent to early graves through self-poisoning of this sort. When you eat without appetite you are simply poisoning yourself. You are filling the blood with all sorts of effete matter, the elimination of which often results in the appearance of serious symptoms of some disease.

There is a mystery about human life, and the wonderful processes that are associated with the various phases of disease, that even the most skilled physician knows little about. A physician stands beside a sick-bed; he sees the patient there struggling for life; he sees the vital spark fast fading away. At such a moment, if he is possessed of intelligence, he realizes his impotence, his inferiority, his inability to understand the great mysteries there before him.MBernarr Macfadden, in Physical Culture.

2 Two Pairs of Hosiery FREE 2

You pay the same price for the hosiery you are now wearing as you would for Pen-Angle Guaranteed Hosiery. Yet it isn't nearly so serviceable as Pen-Angle. We are so positive of this that we doubly guarantee Pen-Angle Guaranteed Hosiery to wear longer than any other cotton or cashmere hosiery, we care not what make or brand.

This is Our Double Guarantee

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to WEAR LONGER than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs FREE of charge.

Buying hosiery on this plan you cannot lose a single cent. If Pen-Angle Guaranteed Hosiery fails to fulfill the guarantee in any particular we bind ourselves to give you back, free of charge, twice as many pairs as you pay for.

The largest hosiery mills in Canada stand back of this astonishingly liberal guarantee. It will be fulfilled to the last letter.

Remember, the wear is not the only thing we guarantee. The fit, the comfort, and the permanence of the dyes are also guaranteed. Could you ask for more?

Pen-Angle Hosiery is made by an exclusive patented p ocess. It is the only Seamless Hosiery, made in Canada, that has the shape knitted into it.

The ordinary way to make Fashioned Hosiery is to stretch it into shape while wet. Such hosiery loses its shape after one or two washings. 48

Ask your dealer to show you Pen-Angle Guaranteed Hosiery. Our guaranteed lines have a guarantee slip in each box. Pen-Angle trade-mark is on the hosiery, too.

If your dealer cannot supply you, state number, size and color of hosiery desired and enclose price, and we will fill your order direct.

FOR LADIES.

No. 1760. Black Cashmere hose. Medium weight. 2-ply leg. 5-ply foot, heel, toe and high splice, giving strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150. Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black and colors. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720. Cotton Hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black and colors. Box of 4 pairs, $1.00; 8 pairs, $1.50.

FOR MEN.

No. 2404. Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black and colors. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500. Winter weight black Cashmere half-hose, 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 330. "Everlast" Cotton Socks. Medium weight. Made from 4-ply Egyptian cotton yarn, with 6-ply heels and toes. Black, light and dark tan. Box of 3 pairs, $1.00; 6 pairs, $2.00.

Dept. 45 PENMANS, Limited, Paris, - - - Canada.

Pen-Angle Hosiery

WARRANTED HIGH PENMAN'S GRADE UNSHRINKABLE

Respect Your Stomach.

Develop a respect for your stomach. Such a policy will in every case yield splendid dividends. Unless you treat your stomach with respect, unless you feed it intelligently, if not scientifically, you cannot expect the blood-making process to be properly completed.

In strength-building one must first learn the importance of limiting the amount of food to what you actually need. Many persons live to eat. Now one should eat to live. By following a policy of that kind you can actually increase your length of life from ten to forty years. You may consider this statement exaggerated, but if you will study the science of diet, and heed the plain conclusions that will come as a result of such study, you will be compelled to admit the accuracy of this statement. The body is fed by the blood, it is nourished from the blood. The blood-making process begins in the stomach, and when you overfeed this important organ, and continue to overfeed it, various poisons are absorbed into the system through the defective digestive process that thereby results. One might say that nearly all diseases begin in the stomach and might also say that disease continues in the stomach. It helps in the process of making impure blood, blood that contains all sorts of poisons. This vile stuff is sent coursing through the body, and under such circumstances some have the incomprehensible audacity to wonder why they are not well. In many instances they might more reasonably wonder why they are alive.—Bernarr Macfadden.

Consumption Book FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1554 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

Report of the Seed Branch.

(Continued from page 521)

During March 1,570 samples were received at the Ottawa seed laboratory for purity or germination test. Of these about twenty per cent came from farmers. Of the 553 samples of red clover tested for purity 211 graded No. 1, 184 were saleable under the Seed Control Act but not first quality, and 56 were prohibited. Of the 264 samples of alsike tested, 103 were No. I, 127 saleable and 33 prohibited. Of the 216 samples of timothy 201 were No. I and twelve were saleable. Of the 74 samples of alfalfa 51 were No. 1, 17 saleable and five prohibited. Two of the red clover samples, one of the alsike and one of the alfalfa were sent in for germination test only and were therefore not tested for purity.

GEO. H. CLARK,
Seed Commissioner.

Feeding the Chicks.

Feeding now claims attention. I do not know of any other subject connected with poultry that has, from time to time, been more criticised or written about than that of the feeding of chickens. Every breeder has his own particular feed or system, and many are very careful lest any word they may let drop reveals any of their knowledge. Each thinks his own system the best, but whether this is so or not, it is hard to tell. Some believe in the dry feed system, whilst others would not have it at any price. Some believe in the no water theory, and others are dead against it.

Both systems have their advantages and disadvantages, as I know from experience, having tried both systems. I do not think I shall try the dry feed syste again, though I am rather a believer in the no-water theory for the first five or six weeks of the chicken's existence, provided they can be put on a grass run when they are turned out-of-doors. I do not think the feeding need vary much for the first ten or twelve weeks, for either hard or soft-feathered Bantams. Practically the same food will do for one or the other.

The first feed, which need not e given for the first twenty-four, or even thirty-six hours, must be composed of hard-boiled eggs, and here the clear eggs taken from under the hen at the time of testing the same comes in useful. They must be chopped up fine and mixed with bread crumbs. I find the machines used by canary fanciers for grinding eggs useful. Some fanciers I know do not altogether approve of giving hard-boiled eggs, but prefer the bread being soaked in the raw eggs.

However, either system will do, and this should form the staple diet for the first few days, varied with plain biscuit soaked in milk. At the end of four or five days good quality broken rice, dried off with thirds or any of the advertised chicken meals can be given. Rice will, to a big extent, counteract any signs of diarrhoea, rather a troublesome ail...ent amongst chickens. The way to cook rice is to put it either in a pan or earthenware jar, and cover with milk or water. Cook slowly for about three-quartes of an hour, and see that it does not clog together, bur remains in single pellets. The meal then easily adheres to it. Cook only sufficient for one day, and it is then more sweet and wholesome.

For the evening feed, canary seed or some of the dry chick foods can now be introduced, and as the chickens increase in age, dari, groats, wheat, millet and a little hempseed can be given. Occasionally, for one of the meals during the day, bread and milk, can with advantage, be given, this being a very good pick-me-up, especially when the chickens are making a lot of feather.

For the first fortnight the chickens should be fed every two or three hours. Little and often is a motto that should be obeyed in chicken rearing. One cannot feed too early as soon as daylight appears, and many are the fanciers who late, and very late, go round with lamp and corn bucket to give their pets the last feed of the day. It certainly pays to attend well to the growing stock.

After the first fortnight a certain amount of weaning can take place, so that at the age of three months, four or five meals a day will suffice, and this number should continue for another couple of months, when the normal number of three will be found sufficient.

Green food should be given from the very first, and a small amount of finely chopped meat may occasionally be given. Fine flint or sand grit must always be within reach, this being a very important matter and it is wonderful to see the amount the little creatures will devour. Flowers of sulphur or a little linseed may now and then be judiciously added to the food to help the chickens in their feathering. I prefer the linseed to be boiled, or allowed to steep in water for twenty-four hours before being given.

Keep the coops and runs in clean condition. If the floor of the coop is of wood keep it well sanded or covered with chop or peat moss. Dust the hen at least once a week with insect powder, and at the same time examine the chickens for ticks, etc. These pests will be found on the head, under the wings, and near the vent, and prevent the chickens from thriving. There are many remedies for the keeping down of these insects, a few of them being vegetable oil of tar, sweet oil, weak solution of paraffin, etc. Theiplaces infested should be touched with any of the remedies mentioned.—H. Inman, in Feathered World.

Portable Poultry Fence.

I have made a substantial, convenient and useful portable fence from 48-inch poultry wire netting. Anything that will make a sufficiently strong stake will hold it up. With an iron bar I make holes about 8 feet apart around the lot where I want my new poultry yard to be. Stakes are driven firmly into these holes. Then a fourpenny nail is driven into the stakes for the wire to hang on.

In hanging the fence, I start at one corner and unroll the netting until I arrive at the starting point. If there is more wire than I need, I leave it on the roll. Then I begin to hang the netting on the nails, which are only partly driven in, stretching the wire as I hang it. Plastering laths I then nail over the netting to the stakes with two or three fourpenny nails, whose heads are allowed to protrude just enough so they can be drawn with a hammer when I want to move the fence again. If one roll of wire is not enough, I overlay a second roll and proceed as described. The unused part is wired or tied with string to prevent it falling down and becoming unrolled.

When the season closes, and I wish to put the poultry in permanent quarters, the nails are drawn, the wire rolled up, the stakes pulled and all laid away for another year. I never cut a roll of netting except for a permanent fence.—S. X. A., in New England Homestead.

Amatite ROOFING
NEEDS NO PAINTING.

MOST ready roofings require special painting and coating, and unless this is done regularly, you are sure to have leaks and trouble right along.

If you use Amatite, nothing of the sort is required. You will have real roof protection WITHOUT PAINTING of any kind.

Amatite is made to stay waterproof and give protection year after year, without any thought or care on your part.

FIRST—Because it is waterproofed with Coal Tar Pitch.

SECOND—Because it has a real Mineral Surface.

Amatite, owing to these features, is the most economical roofing made. Its first cost is low, and you are SAVED all future expense for repairs or paint because it will need neither.

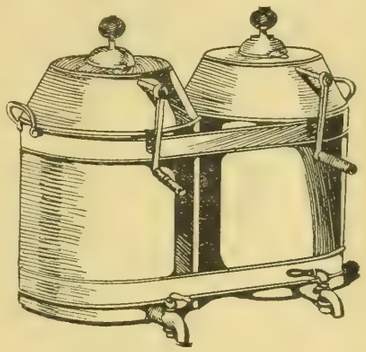
If you haven't seen Amatite, write for a sample to-day. From it you will very quickly understand why it doesn't require painting; why it does not leak; and why it saves you money.

Address nearest office to-day.

The Carritte-Paterson Manufacturing Company, Limited,
St. John, N. B., - Halifax, N. S.

A 'BOON and BLESSING'

You can banish the drudgery of wash day, and can clean your clothes more thoroughly without rubbing, in shorter time and with less than half the water, by using—



McKuen's "PERFECT"
Washing and Boiling Machine.

Colored clothes, fine fabrics and flannels can be cleaned with the same ease in a "Perfect," which can be used in the smallest kitchen on a gas, oil, wood or coal stove, without inconvenience. The 'wear and tear' in washing clothes on a "Perfect" is unnoticeable and the machine is quite easily operated. Send for booklet describing how the "Perfect" works what and it will do! Its price is within the reach of all Also manufacturers of the "Perfect Vacuum Cleaner.

THE PERFECT MFG. CO., Guelph, Ont.

AGENTS WANTED.

We are also manufacturers of the **"PERFECT" Vacuum Cleaner.**

It Pays to Paint Farm Buildings.

The prosperity of the farmer is generally reflected in his farm buildings. These can and should be attractive to the eye. It must be confessed, however, that in most cases barns and outbuildings are a blot on the landscape. This is not as it should be. Paint would right matters. Farm buildings neatly painted are a source of pride to their owner And this extra touch add substantially to the value of the farm.

All agree that buildings look much better when painted. The question we want answered is, "Does it pay?"

It may not pay, directly, to paint our barns. In fact, its preservative effect on ordinary rough siding would scarcely pay for the paint. On new smooth siding it would pay. Indirectly it does pay, however, no matter what the siding. Well painted buildings add to the value of the farm, a sum far in excess of the cost of a coat of paint.

Let us look at it in this way: Consider two communities in close proximity to each other. They are equal in every resuect, save that in one community the buildings are all painted, while in the other they are not. Farms in the former instance will invariably command more money Prospective buyers cannot but be attracted to such a section. The business man knows the value of attractive surroundings.

There are several brands of ready mixed paints on the market which are satisfactory. These should be used by those who have had no experience in mixing paints. Those who plan to mix their own paints should heed the following suggestions: Avoid cheap oil. Use good pale-boiled oil even if it costs a few cents a gallon more. If raw oil is used, dryer must be added.

When we have decided to paint, the question arises, "How shall we apply it?" The ordinary method of hand application is familiar to all. In recent years, the spray pump has been recommended as a cheap and efficient means of painting outbuildings. It proves quite satisfactory. The spray covers the surface well, though somewhat unevenly, and it is necessary to brush it if a good job is desired. This brushing is easily accomplished by means of an ordinary whitewash brush to the side of which a long handle has been attached.

The advantages of the pump as a means of painting are that the paint is applied quickly and cheaply. This practice has its disadvantages in that fully one-half more paint is necessary and one does not get the fine gloss possible when the paint is applied by hand and well rubbed in.

Where a pump is to be used for applying the paint, the cheap, cold water paints are probably preferable on account of waste. For purposes of whitewashing, the pump is always ahead of the brush.

When selecting a color, it is well to remember that red will look well longer than any other shade. A coat of paint every eight or ten years will keep the buildings looking well. —Farm & Dairy.

Hints on Hatching for Back Yard Poultry Keepers.

Love for experimenting prompts one to try one's luck at hatching and rearing chicks; and few hobbies provide so much pleasure for so small an outlay. Having decided upon the breed you intend to keep, do not hatch more chicks than you have convenience for. Some fanciers make a practice of hatching two broods, although they have only accommodation for one lot. They are, they say, then on the safe side if they should be very unfortunate with the hatches, or if the quality out of one be not up to expectations, or if they get a large percentage of cocks.

Never put all the eggs in a special sitting under one hen; put them under two broodies and make up the full sittings with some from your own pen or of a cheaper quality, because if you are unfortunate with one half-sitting you still have the other half to fall back on.

Have the nest in readiness before the hen or eggs, so that you do not have to fit up a makeshift nest in a hurry. A suitable nest can be made in a box 18 in. square with a strip of wood nailed across the front to keep the nest in position inside; or you may make a loose nest in some dark corner or secluded spot, as the hens prefer semi-darkness for their maternal duties. The nest itself should be made of soil, and the centre scooped out, but neither deep nor shallow. The soil should be covered with litter—hay, straw, or chaff—and such a nest should throw off sufficient moisture for shells of average thickness. Place some dummy eggs in the nest and put the hen near at night-time. If she is a stranger the nest will be strange to her, so be patient. She will then, if very broody, glide on the eggs to settle down. Cover her up and leave her for twenty-four hours.

Some people let the broody hen come off the nest at pleasure, but personally I prefer to know when it is off and on. Remove her next day (but night for preference), and substitute for the dummy eggs those you intend her to sit on. See that she is provided with heat-giving food (Indian corn is suitable), and that she comes off daily for about fifteen minutes for exercise, food and water. Sprinkle a little insect powder on both hen and nest, as this will check vermin, which thrive during the hot weather.

The eggs should be tested about the tenth day, and all clear ones removed, instead of wasting the hen's time and energy on eggs that would never hatch. When the time has expired you may reasonably expect some chicks, which should be hatched out dry and strong, be removed in a lined basket near the fire, as the part-hatched and weakly ones will have a better chance. Remove broken shells and feed the hen by herself when the hatch is complete, or she may be off searching for food for the chickens, which they do not require for at least twenty-four hours. Stale bread crumbs and hard-boiled egg chopped fine should be the first meal, after which they can be fed on any previously proved successful system. Feed a little at a time, but often, gradually increasing the quantity of food and the time between meals.—Hidlander, in Poultry, England.

YOUR OPPORTUNITY

for securing a **Right Start** in business life is offered through a course at this reliable, old-established and progressive school. Open all year. Write for prospectus.

BritishAmericanBusinessCollege
(Established 1860.)
Y. M. C. A. Building, Toronto.

The electrically-welded, solid-piece frame gives strength and stiffness to

Peerless Farm and Ornamental Gates

We build Peerless Gates to last a lifetime—handy, convenient and attractive. They remain staunch and rigid through all kinds of rough usage. The frame is made of heavy steel tubing electrically welded into one solid piece. The Peerless Gate, like the Peerless Fence, saves expense because it never needs repairs. We also make poultry, lawn and farm fences of exceptional strength. Write for free book.

THE BANWELL HOXIE WIRE FENCE CO., Ltd., Box K, Hamilton, Ont., Winnipeg, Man.

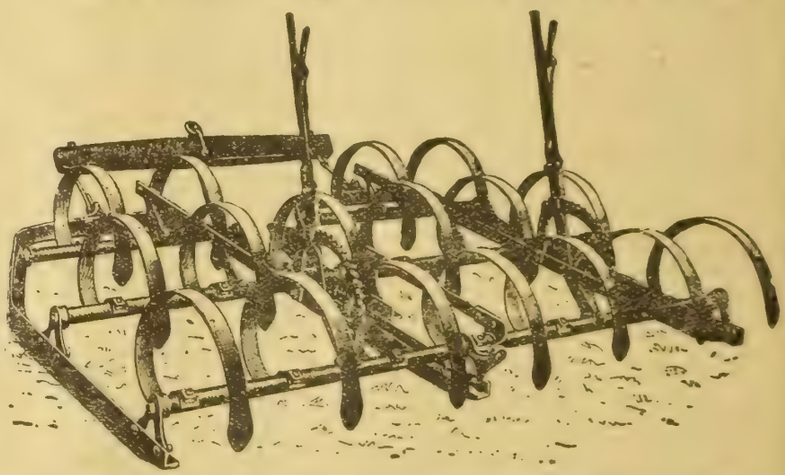
The above cut of the four row sprayer illustrates how one man may quickly and thoroughly spray large fields of potatoes.

This Row Sprayer can be attached to any pump and any style of cart or wagon. No trouble from clogging nozzles.

Manufactured By

R. B. WESTHAVER, Mahone Bay, N. S.

Lever Spring Tooth Harrows



The finest harrow made. Teeth can be adjusted in the field to any depth, and work regulated as required. Saves largely on labor and does more effective work than any harrow on the market. Highly recommended by progressive farmers who have them in use.

This cut shows teeth thrown up for dumping rubbish or for transportation. Made in sizes 11 tooth, one section; 15-tooth, two-section; 17-tooth, two-section; with 1 1-4″ or 1 1-2″ teeth. Made by

Bailey-Underwood Co., Ltd., New Glasgow, N. S.

Concrete Tanks

Not only on the farm, but in the creamery as well, there are indisputable advantages in a water tank which is both easily cleaned and durable. In both these respects, and in many more concrete tanks seem to fill the bill perfectly. A bulletin has been issued as No. 23 by the Association of American Portland Cement Manufacturers of Philadelphia, Pa., which fully describes the uses of concrete tanks and gives full details for their construction. The advantages of concrete for tank construction are summarized as follows in the bulletin:

Materials necessary for construction are easily obtained.

Concrete tanks are easily built.

They can be built anywhere.

They need no repairs.

They will not rot and are practically everlasting.

They do not dry out if left unfilled.

They do not crack owing to extreme changes of temperature.

They will fit any space desired.

They are vermin-proof.

They are sanitary.

They are artistic.

Charlottetown Prices.

GRAIN—Wheat, none sold except imported for seed; oats, 36c to 45c; barley, Island grown for seed, 80c to 09c; buckwheat, Island grown for seed, 70c to 90c.

FEEDSTUFFS, bran retail, $25.00 to $27.00, per ton; shorts, retail, $26.00 to $30.00 per ton; middlings, retail, $26.00 to $30.00 per ton; oil cakes, retail, $2.25 to $2.50 per 100; cornmeal, retail, $1.80 to $1.90 per bag.

GRASS SEED—Timothy, retail, 5½c to 7c; common red clover, retail, 19c to 21c; mammoth red clover, retail 19c to 22c; alsike, retail, 18c to 19c.

LIVE STOCK—Butcher's cattle, 4c to 6c per lb. live weight; sheep, $5.00 to $6.00. each.

DRESSED MEATS—Beef, (carcasses) $9.00 to $11.00 per 100 lbs.; mutton, carcass, 8c to 9c per lb.; veal, 4 1-2 to 5c per lb.; pork, 10c to 11c per lb.

HORSES—Drafters, all prices; roadsters, all prices; carriage, all prices.

DAIRY PRODUCTS—Creamery butter, solids 25c; prints, 26c; dairy butter, 20c to 24c; cheese, old stock, 12 1-2c to 13c.

POULTRY AND POULTRY PRODUCTS—Eggs, 16 1-2c; fowl, 12c per lb.

VEGETABLES—Carrots, 30c to 40c per bushel; potatoes, 20c to 25c per bushel; turnips, 12c to 14c per bushel.

MISCELLANEOUS—Hay, pressed $10.50 to $11.00; straw, $5.50 to $6.00; wool, 32c cash, 25c trade; beef hides, 9 1-2 to 10c; calf skins, 12c; sheep skins, 90c to $1.25; young pigs, $7.00 to $8.50 pair;

Trade in produce has been quiet and there is not very much farm produce moving

Potatoes are very quiet and shippers are not able to place any quantity and farmers are busy at other work and the low price does not tempt them to haul. We think there is not a large stock of McIntyres held by farmers as they did not keep well, but there is quite a lot of reds, which do not sell well in the local markets.

Hay is firm and demand fairly good. Oats are quiet and very few moving, the farmers are not hauling any and buyers are not able to realize cost for what they have in store and the trade is at a standstill and in the mean time the trade is being supplied with western oats. Eggs are plentiful and prices are working downward but not fast enough to please the buyers. Some Maritime farmers have hay men through the Island buying and buyers have held prices up and complain that they are not able to realize cost on some hay held on hand. Crop conditions are favorable and the planting is well undrweay.

How to Value a Boar.

A subscriber who has been reading the Swineherd and is somewhat confused in reference to reaching the boar's value, asks us regarding the same and whether prizes won determines this question.

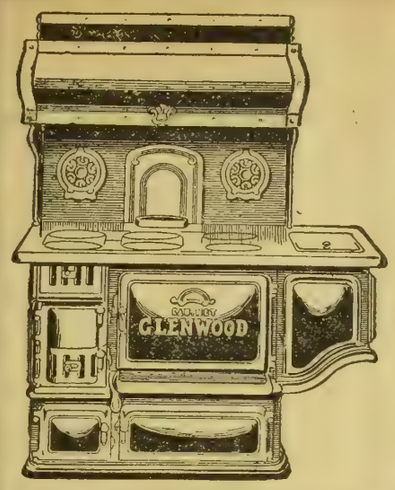
In reply we can say that sometimes boars have been great prize winners yet have been valueless afterwards as breeders. Of course, these are exceptions, for them to fail as breeders. No matter how high they have been sold or how great have been their winnings if they are failures they become discredited. The most valued prize that any boar can win is one that is given him on his production or on boar and get. It is one on which appearance of the boar himself does not count, but it is his work that counts and it is this work that gives him his value. This is the most honorable and most valuable prize that any boar can get, and one that determines his standing among the great boars. A good deal of this also depends upon the enterprise of the breeder in bringing the facts to the knowledge of the public, because value to some extent in great breeding boars is sentiment or opinions formed by the mass of breeders. The breeders and judges and the more convincing you can present their value and the more and valuable breeding work done.

It is dimcult to make a boar very popular until after his get have won prizes or the breeding is pretty generally known to be of show stuff and, therefore, good sellers. And when a hog is able to do this they are pretty certain to find their way to the fairs. has not advertised his good points good points in favor of a boar, the greater is the demand for the breeding of the boar, because it is made public by the enterprise of the breeder in getting the publicity and attention directed to his boar. There may be another boar of equal value but people do not know it, through lack of enterprise of its owner. He

It does not do to take the statement of one breeder in forming your judgment upon what is the best and most valuable animal, but look to the facts that are the basis of the statement. Make an investigation yourself. See what he has done, and whether the things that he has done are really of such importance as to give him the standing that is claimed for him.

Everyone is to a certain extent prejudiced in favor of their own if they believe in them. The most valuable boar is the one that can do the most valuable work and then is made public by his enterprising owner. He is one that is earning the greatest salary for his breeder.—American Swineherd.

The following is recommended for galled shoulders: Take half ounce each of sulphate of zinc, sugar of lead and pulverized alum; put into a quart bottle or self-sealer can; fill with water, shake thoroughly and bathe the sore part with it.



If You Want Your Meals Cooked Right You Must Have a Stove That Will Cook Evenly.

That is just what The Glenwood Ranges will do. The flue strips are evenly divided. The oven damper is sure. The heat is even around your oven and you will have satisfaction. The Glenwood Ranges have been tested and proven what they can do and we guarantee every range we put on the market. If you have not one of our ranges in your district, write some of your friends in St. John and ask them what they think of the Glenwood Ranges and write us and we will send you prices and cuts of our stoves. We make all our Glenwood Ranges in St. John. When you buy one you are booming St. John, and when booming St. John you are helping New Brunswick and the Maritime Provinces in general. Buy a Glenwood Range.

McLEAN-HOLT & CO., 155 Union St., - ST. JOHN, N. B.

AFTER DRUGS FAIL== I'LL CURE YOU.

Go try them all; drugs, dope, patent nostrums and doctor's concoctions, and after you have found by experience that none of them will help you, then come to me and I'll cure you, Nature's way.

I've quit asking people to come to me first; to do so would save them many a dollar and lots of useless suffering, but experience is the best teacher and the only thing that will really convince a skeptical mind.

The time is near when doctors who use drugs will have to abandon that system of treatment for the natural treatment, electricity.

Why, there's Prof. Osler, a world-famed scientist, who said recently that most drugs are worthless.

Dr. Albert Leffingwell, of the American Humane Association, says that the average length of human life would not be diminished by an hour if all the drugs of Christendom were dumped into the sea—barring, perhaps, half a dozen.

How does electricity cure, you ask. By helping Nature. Nature will cure you if she has the power. Electricity is that power. Understand that your machinery is run by electricity. The stomach, heart, liver, kidneys and digestive apparatus are run by electric energy, which is created by the digestion of food in the stomach. Most sickness and chronic disorders can be traced to the failure or breaking down of one of these order. The reason any part fails to do its work is because its supply of electricity is insufficent. Restore that force and pain and sickness will disappear.

Electricity is nerve-food—nerve-life. It makes vigorous men out of weaklings.

I have the only successful method of applying electricity. It has taken me twenty years to perfect my applicance, and I know what I can do.

My Electric Belt is worn while you sleep. Just put it on and turn on the current. There is no shock or burn; the only sensation is a soothing glow.

I have testimonials from people all over the Dominion, who have found health in my treatment. You won't believe these letters, but they are bona fide.

Dear Sir,—I write to le you know that your Belt has cured me, and I am entirely satisfied with your treatment- I gave it to my sister to wear, and she, too, was entirely cured, after being treated by many different doctors, and also being told that she would have to go under an operation, to which she would not consent- She used your belt and was entirely cured.

JOHN W. THIBAULT,
Bruce Mines, Ont.

Dear Sir,—I have worn your Belt for a month, and find that it is doing me great good. My stomach trouble is better, and I also feel stronger in every way. I am well pleased with the Belt.

THOMAS COPELAND,
Lakefield, Que.

Electricity is a lot cheaper than a course of drugging, besides it cures where drugs don't.

Call or send for my free book, read it over and then use your own judgment.

I GIVE IT FREE !

Get my 84-page book describing my treatment, and with illustrations of fully developed men and women, showing how it is applied.

This book tells in plain language many things you want to know and gives a lot of good, wholesome advice for men.

If you can't call, I'll send this book, prepaid, free, if you will inclose this coupon.

Office Hours—9 a. m. to 5.30 p. m. Wednesday and Saturday to 8.30 p. m.

M. K. McLAUGHLIN,
214 St. James Street, Montreal, Can.
Please send me your Book, free.

NAME.....

ADDRESS.....

Save Fence Posts

Fence posts are too dear now to be thrown into the ground without any extra preparation. They soon decay and are useless if they receive no treatment of preservative. This decomposition of the post is caused by low forms of life which are technically called fungi. These plants live on the posts and sap the "life" out of them. This allows the moisture to get into the posts which softens the wood for further growth of the fungi. Any preparation which will prevent growth of these fungi will serve as a preservative of the posts. One of the simplest and cheapest of treatments that can be applied is to mix lime with water to the consistency of whitewash. If you can have a place where the solution can be kept hot, so much the better. Dip the part of the post which will be under ground into this, and allow it to remain there for five minutes. If at all possible it would be well to immerse the whole post for the five minutes instead of underground part only. Posts treated like this have been known to be sound after ten years even when the ground was water-soaked.—Canadian Farm.

Canker

Canker in horses is a diseased condition of the foot, much more serious than thrush and although it, like thrush, usually begins in the frog, it soon extends and involves the whole of the sole and sometimes even other parts of the foot.

SYMPTOMS.

The frog bcomes large and spongy and covered with matter of a cheesy appearance and of exceedingly offensive smell. Sometimes the discharge is watery but very abundant and always of a vile odor. This disease is more likely to occur in heavy horses, especially where the feet are large and weak.

A novice should never attempt the treatment of a pronounced case of canker. It is the work of a professional man and even in such hands is often most difficult to manage. It is almost always necessary to cut away the whole sole of the foot and as the result of such an operation necessitates a protracted period of nursing as well as of professional attendance it will be found that in many cases the value of the animal would not warrant the expense incurred and it would prove more profitable to destroy the patient than to treat him.

Milk Thickens When Boiled

A subscriber writes: "Can you tell me why it is that when we boil our Jersey's milk it thickens. She will not be fresh for two months. Is her milk fit for use?"

In milk there is a substance called albumen which resembles the white of an egg and which, like it, coagulates when heated to anywhere near boiling point. It is this that scalds on the tin if the first water used in washing dairy utensils be hot. For this reason we always advise rinsing milk pails, etc., with warm water before washing them with hot water.

In normal milk the percentage of albumen is so small (only about three-fourths of a pound to 100 pounds of milk) that it will not, if sweet, coagulate. However, colostrum, or the milk of a cow just after she freshens, contains a very high per centage of albumen, often twelve to fifteen per cent. Such milk will readily thicken when heated on account of this percentage of albumen. Cheese and butter makers often take advantage of this fact to test milk, where they suspect a patron of sending the milk of a new milch cow too soon.

The reader will readily understand that where a cow continues to milk too close to her time of again freshening, her milk may reach the stage where it contains such a high percentage of albumen that it will thicken when boiled. In such cases it is best to put a cow dry as early as possible. Furthermore, a cow is better of this short rest to enable her to recuperate for her next milking period.

Beware Imitations.

Ruberoid Roofing

(TRADE MARK REGISTERED.)

You have no roof troubles when your house is covered with RUBEROID Roofing, which is weather-proof, sun-proof and fire-resisting.

RUBEROID Roofing resists sudden changes from hot to cold—the kind of changes that cause other roofs to crack and warp.

There are more than 300 imitations of RUBEROID, which is an evidence of its merits. Inferior articles are never imitated.

You can always identify it by the picture of the RUBEROID man on the outside of the roll and the word "RUBEROID" stamped on every few feet on the underside of the material.

RUBEROID costs less to maintain than shingles, tin, slate or any other ordinary roofing.

FREE ROOFING BOOK.

For your name and address we will mail you an instructive book on roofing—"All About Roofing."

Ask your dealer to show you a sample of the "17-year-old" RUBEROID roof. This sample was cut from a roof laid in 1892, and exposed to the weather for 17 years. If your dealer does not happen to have a sample, write to us direct and we will send you one by mail.

THE STANDARD PAINT COMPANY OF CANADA LTD.,

Manufacturers, MONTREAL. Agents Everywhere.

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton • New Brunswick

To Prevent Growth of Horns

For several years caustic potash has been used throughout Canada to prevent calves from growing horns. The following method has been very successful:—

The caustic potash should be applied as soon as the "button-like" horns can be felt, after the calf is three days old. If postponed the operation may give unsatisfactory results. To apply the potash, the hair is removed from about the horns close to the skin. The potash is moistened slightly and rubbed over the skin which covers the points of the horns until the skin is white.

It is not necessary to rub the skin until blood comes, as this will cause unnecessary soreness. One such treatment is usually sufficient to prevent the growth of the horns.

The following precautions should be taken: The caustic should be wrapped in heavy paper to protect the hands of the operator; the caustic should not be moistened too much, so that the liquid will run down the side of the calf's head, for this will cause unnecessary pain; the calf must be securely fastened so that the head may be held still to avoid applying the caustic anywhere except over the horns. One stick of caustic potash, if preserved in a tightly-corked bottle, will serve to dehorn many calves.

Midsummer Agricultural Meetings.

It is proposed by the Commissioner for Agriculture for New Brunswick to have speakers in attendance at the following places on the dates mentioned to give demonstrations and lead discussions at afternoon meetings and to address evening meetings. The subjects to be taken up are Soil Cultivation, The Judg-

OUR DIAMOND JUBILEE YEAR

PAQUET GUARANTEED CLOTHES

Made to Your Measure, But NOT Custom Made

THIS looks paradoxical, but it's none the less true for all that. What's more, we can prove it to your entire satisfaction, and stand ready to refund your money, if you are not ABSOLUTELY SATISFIED with your Clothes when they arrive.

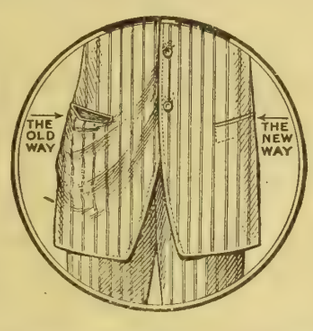
PAQUET Guaranteed CLOTHES, as their name implies, are GUARANTEED to fit you perfectly. All Ready Made Clothes are cut and made up to fit AVERAGE types, not REAL men. That's why they don't fit YOU. And they can't be MADE to fit, either, without being all ripped up and recut—a very expensive undertaking, and, therefore, out of the question.

PAQUET Guaranteed CLOTHES are cut to fit BEFORE they are made up at all. That's why we can GUARANTEE them to fit PERFECTLY. Our new style book tells all about our method of Clothes making. PAQUET Guaranteed CLOTHES are GUARANTEED to be the best value in Canada to-day at from $10.00 to $14.25—worth $13.50 to $20.00.

The Suit Illustrated

is made from absolutely PURE WOOL, navy or black serge, best Indigo Dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unexcelled in this country. The real value is $13.50. Our special price, PREPAID, to any part of Canada..... $10.00

Sizes 36 to 44 only. Larger sizes 75c per size extra.



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is made from absolutely PURE WOOL, navy or black serge, best Indigo Dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unexcelled in this country. The real value is $13.50. Our special price, PREPAID, to any part of Canada..... $10 00

Sizes 36 to 44 only. Larger sizes 75c per size extra.

The Famous "BARTELL PATENT" Pockets

are used in all our garments. This is a feature well worth considering. BARTELL PATENT Pockets will not sag nor gap and will retain their shape permanently. This feature not only greatly improves the appearance but adds to the life of any garment. BARTELL PATENT Pockets are to be found only in the highest grade Clothes, which is one of our reasons for adopting them for use in the making of PAQUET Guaranteed CLOTHES.

Read These Opinions From Satisfied Purchasers

Langdon, Alta.,
February 17th, 1910.

THE PAQUET CO., LTD., QUEBEC.

DEAR SIRS:—Received my suit to-day, and wish to say that you have certainly satisfied me. The value you give is astonishing, as I think I am correct in saying that you could not purchase this suit here under twenty (20) dollars.

Yours truly,
H. D. P.

Yale, B. C.,
February 22nd 1910.

THE PAQUET CO., LTD, QUEBEC.

GENTLEMEN:—The suit reached me on the 19th, inst., and am pleased to say that it is highly satisfactory, and will be glad to recommend your House in future—well made, and a good fit.

Yours truly,
W. D.

Pictou, N. S.,
March 27th, 1910.

THE PAQUET CO, LTD. QUEBEC.

DEAR SIRS:—Kindly send me samples as I want to get a suit both for work and Sundays. I see a few of your suits here and they are the best I have seen for a long time and do not know how you can put them up so cheap with such good work on them. Yours
J. C. P.

Write for Free Style Book

illustrating New York's latest models, and containing samples of the very newest materials for the present season. This book also contains our special self-measurement chart, which is so simple and concise that anyone using it is absolutely certain to be fitted PERFECTLY.

Write NOW! Don't put it off until another time—a postcard will do—you'll get the Style Book by return mail.

THE PAQUET COMPANY LIMITED.
Mail Order Dept.
QUEBEC, - CANADA.

Our General Catalogue

for Spring and Summer is overflowing with special values of interest to every reader of this paper. If you have not yet received a copy, write for yours NOW. Simply say "send your Catalogue No. 23," and you'll receive it just as soon as the mails can get it to you. You NEED this Catalogue if you value money. Write TO-DAY.

ing of Horses and the Judging of Dairy Cattle. Each meeting will be placed in charge of the Agricultural Society of the District and it is suggested that a picnic meeting be arranged so that those in attendance may get their suppers on the ground and then be on hand for the evening meeting.

A small piece of land, about a quarter of an acre, which will have been plowed and harrowed, will be used to demonstrate cultivation and horses and dairy cattle will be brought in for judging. Men of long practical experience and expert knowledge will conduct these meetings:

Tuesday, June 14—Andover.
Wednesday, June 15—Glassville.
Thursday, June 16—Centreville.
Friday, June 17—Debec.
Saturday, June 18—Harvey.
Monday, June 20—Hoyt Station.
Tuesday, June 21—Armstrong's Cor.
Wednesday, June 22—Greenwich.
Thursday, June 23—Queenstown.
Friday, June 24—Kingston.
Saturday, June 25—Sussex.
Monday, June 27—Elgin.
Tuesday, June 28—Havelock.
Wednesday, June 29—Hillsboro.
Thursday, June 30—St. Anselme.
Friday, July 1—Sackville.
Saturday, July 2—Shediac.
Monday, July 4—Buctouche.
Tuesday, July 5—Rexton.
Wednesday, July 6—St. Louis.
Thursday, July 7—Fords Mills.
Friday, July 8—Napan.
Saturday, July 9—Bathurst.
Monday, July 11—Balmoral.
Tuesday, July 12—Doaktown.
Wednesday, July 13—Stanley.
Thursday, July 14—Bear Island.
Friday, July 15—Campbell Sett.

The above list is not final but any changes will be announced.

Keep these dates in mind and do your utmost to make the meetings held in your vicinity a decided success. Bring your boys and girls and together work for the advancement of agriculture in your locality.

To further the interest in this work the Department is asking that the members of the Agricultural Societies and their friends, accompanied by their wives and children bring lunch baskets and have a social lunch together on the grounds after the demonstrations are completed and thus occupy the time until the evening meetings are held.

267 Eggs in 365 Days

is the wonderful and unbroken record made by the Barred Plymouth Rock Hen,

Columbia

who was the foundation of the greatest Egg-producing and Prize-winning strain of Plymouth Rocks in the world to-day. Weight of females, 7 to 10 pounds; males from 8 to 11 pounds. Eggs for hatching for sale every month in the year and a few choice breeding birds on hand now, as we are practically done hatching this season.

For prices and photos apply to the Originator and Breeder of this wonderful strain of fowl. Satisfaction guaranteed.

P. A. PEARSON,
CALAIS, - - MAINE.

Card of Thanks and that Kind of Thing.

Bloomfield Farm.

The undersigned beg to thank their friends for their very liberal patronage in the past which we trust has been mutually satisfactory and at the same time to say that we are still in the "running" at the old stand, with Ayrshires, Guernseys, Shropshires, etc. etc. Our specialties just now in stock for sale are 4 Ayrshire bulls, ranging in ages from 8 months to 18 months, purebred and registered. 1 Guernsey cow 6 years with calf at her foot, two days old. Heifer, this cow is a very superior one in every way and of the higheat registry in the Dominion. Also 20 Shropshire lambs, pure bred season 1910 and fine ones. Likewise, 4 pure bred Coolie puppies 4 weeks old. Would be pleased to hear from prospective buyers whose requests will have our prompt and best attention.

John McDonald & Son,
Bloomfield Farm. - Shubenacadie, N. S.

Shorthorns For Sale.

One pure bred bull 8 months old. one pure bred heifer 8 months old, one pure bred heifer 2½ years oldt one pure bred cow 4 years old. The first two are sired by Emma's Fashion. The last two are in calf by Emma's Fashion. Apply to

CHAS. B TAIT,
Oxford, N. S.

Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.

Correspondence solicited.

WM. ERB, - Sussex, N. B.

Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching from me. My Reds are imported from the United States and were winners at Sussex Halifax, Fredericton and Amherst Winter Fair in 1909. Prices on application.

Thomas S. Kyle,
Sussex Corner, New Brunswick

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone. Sussex, N B

For Sale.

Ayrshire Bull Calf "Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

JAMES BARRETT,
Hill Grove Farm,
Crouchville, St. John, N. B.

The PUBLISHER'S DESK.

A Book Worth Reading Twice.—Books issued as an advertisement are often handsome and sometimes interesting. Rarely, though, are they both at once in any such degree as is the latest product of The Pedlar People of Oshawa, those "advertisers in plain English" with whose straight talks most of our readers are familiar. This progressive house has just issued a new edition of their famous booklet "Roofing Right", which is elaborately illustrated from actual photographs of farm buildings in all parts of the Dominion that have been roofed with Oshawa Shingles to the satisfaction of their owners and occupants. The new "Roofing Right" contains forty-eight pages, magazine size, and is as complete a treatise on the merits and faults of all kinds of roofing materials as has probably ever been put between covers. When one has read it through there is little left to guess at on the question of roofing. The book is written in a frank, plain spoken way and must prove valuable to anyone interested in the choice of roofing for any building. We learn that the Pedlar People have a few copies remaining of the large edition recently printed, and we suggest to our readers the wisdom of applying at once for this valuable work, which is sent free and postpaid on request to any subscriber of this paper who mentions it when making his request. When writing ask for Booklet No. 17.

The Kawartha Lakes.— When Samuel de Champlain was leading the Hurons through the beautiful Kawartha Lakes he fancied the butternuts and other low trees were orchards set out by the hand of man, so picturesque and charming were the shore-trees laced and laden with running grapevines. And to this day, through the farmer has made his home in the "Highlands" and the picturesque war canoe of the Indian is gone from these waters, the shadowy shores of Wawartha Lakes are still beautiful to behold. Owing to the high altitude of these lakes, nearly 1,000 feet above the sea level, the air is pure, and laden with health-giving and soothing balsamic odors from the pine and spruce-clad hills—it renews physical vigor, restores the nervous system, invigorates the mental faculties, and gives a new lease of life. To those who suffer from hay fever, the Kawartha Lakes are a haven of heaven-given relief and security. Easy of access (three hours from Toronto by the Grand Trunk Railway), profuse in its gifts, and diverse in its attractions, having its fashionable resorts, and its delightful facilities for "roughing it." Why not throw business to the janitor for a month, cast care to the dogs? and when you return from the "Bright Waters and Happy Lands" (the English rendering of the Indian word "Kawartha") you will be a new creature, fortified for another year's trials.

BEE-KEEPING PAYS

best under modern methods. Large profits from small investments. Any one can learn and get fair crops of honey first season. Books of instruction, Bees, Queens, hives, sections and comb foundation at lowest prices. Price list free. E. L. COLPITTS, Box 10, Petitcodiac, N. B.

Homestead Farm

Has one of Canada's leading Holstein Herds. Have won more prize money in the last five years than all other Maritime Holstein herds combined. Have more officially tested cows than any other herd in the Maritime Provinces and more high records. 6 cows over 20 lbs. butter in one week and some of those close to 24 lbs. Our champion cow at the Winter Fair has no official record while the fourth prize cow has a 23 lb. record.

We have a lot of young stuff to sell of the very best breeding. You can't afford to miss this. A few cows cheap. We also offer a few ewes (not bred) lambs of 1909.

Our Clydesdales are in splendid shape, and we can part with the two foals of '09.

No. 1 Stallion.—Dam, Soubrette, Imp., by Labori, champion at Halifax, 1909; 1st prize 1908. No. 2 Filly—Dam, Pink Rose, Imp., by Up to Time, 2nd at Halifax 1908; 3rd, 1909. Both are sired by Handy Andy, Imported by Marmion out of a Baron's Pride mare. Write or come and see us.

LOGAN BROTHERS, - - Amherst Point, N S.

BELLEVUE STOCK FARM.

Ayrshire and Shorthorn Cattle.

Bellevue won female championship and all of the herd prizes in Shorthorns, with every animal our own breeding. In Ayrshires we have held the male championship for two years. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - - TRURO, N. S.

AYRSHIRE CATTLE, YORKSHIRE AND BERKSHIRE PIGS.

We have for immediate delivery some choice, young, pure bred Berkshire and Yorkshire Pigs. Also have some fine Ayrshire pure bred stock.

These all are of exceptionally high goods. Prices reasonable. Correspondence solicited.

THE S. H. WHITE CO., LTD., - - Forest Glen, N. B.

Cobequid Farm Holsteins For Sale.

Two bulls fit for service from record of merit dams. Three heifers two heifers two years old, and two heifers one year old, bred to Hellon Dekol's Prince. Three young cows, bred to Sir Rooker Posch Artis. Several bull calves from three to six months old. Come and see them.

SAMUEL DICKIE - - - Central Onslow, N S.

SHORTHORN BULLS FOR SALE.

I have, for immediate sale, eight very nice Durham Bulls, from two to fifteen months old. They were sired by a bull imported from Hon. John Dryden & Sons and are out of excellent cows. Write us your needs. We can supply them and will give you good satisfaction

C. C. H. EATON, - Canard, Kings Co., N. S.

"Brooklands'" Holsteins for Sale!

We are now offering one Holstein Heifer, 6 months old, and one Holstein Bull, 6 months old, for sale. These Calves are "not akin." $80.00 will take the pair. For full information write

C. H. GILES, - "Brooklands," - Fredericton, N. B.
'Phone 2100. - - - P. O. Box 119.

MAPLE FOREST STOCK FARM.

YORKSHIRE SWINE.

ADDRESS:

S. J. GOODLIFFE, - Sussex, N. B.

COVEN HOVEN STOCK FARM

St. Andrews, N. B.

The hadsome Clydesdale Stallion Sir Hugh MacAdam (9408) rising 3 years. Choice young stock in both sexes of those wonderful utility dairy breeds; the Dutch Belted and French Canadian Cattle. In Tamworth swine we have several excellent young sows for sale. Prices most reasonable. Write or visit us.

J. R. CASTLER, Supt.

Milking Shorthorns!

I have for sale five yearling Shorthorn Bulls, sired by bull, "Broad Scotch," 7-8 Cruikshank blood.

For 10 years I have put away the light milkers and am only now breeding from heavy producers.

Satisfaction guaranteed.

Bliss M. Fawcett,
Sackville, - - N. B.

Eggs! Eggs! Eggs!

For Hatching.

From stock that won the big silver cup for "best exhibit at the Maritime Winter Fair" at Amherst. No better in Eastern Canada. Drop a line and get our mating list. Half price what you pay for Ontario and American eggs of the same quality. B. P. Rock, White and Brown Leghorn cockerels for sale.

SETH JONES,
Box 39, - - SUSSEX, N. B.

THE MARITIME FARMER
AND
CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

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Why and When to Underdrain.

By F. L. Fuller, Truro, N. S.

IN view of the preceding articles on this subject, a few words relative to the kinds of soil which should be drained and the reasons why may not be amiss. Furthermore, lest some readers may be carried away with the prospects of profits as set forth in the preceding records and, without due consideration, be led into an extravagant and unprofitable system of drainage, we may add some of our own experiences and urge readers to carefully consider the matter before making large expenditures.

As the kinds of soil that need draining and the reasons for the same cannot be discussed separately we will state some of the reasons and then apply them to our existing conditions.

1. It deepens the soil in which plant roots grow.
2. It allows air and heat to enter the soil.
3. It enables manure to act more beneficially.
4. It lengthens the season.
5. It permits of tillage operations being done more easily.
6. It enables plants to resist drought.
7. It prevents washing and consequently, increases production, which is the most important of all.

Water is the most important factor in plant growth. It is the vehicle which carries all food from the soil to the plant. An eminent agriculturist has said that if he could control the supply of moisture he would have solved the greatest problem of plant growth.

Take for example any of our farm seeds. The three essentials necessary to start a plant are: moisture, air and heat. In a soil completely saturated with water we can have no air, and consequently cannot even begin to grow a plant. As air and consequently heat are admitted to the soil when the free water is withdrawn, it is, therefore, evident that the most important essential to plant growth is within man's control. Furthermore, the extent to which this moisture can be controlled at a cost below the value of the increase of crop caused thereby is the measure of man's success in underdraining.

Scientists tell us that water occurs in the soil in three forms, viz., free water,—that which appears when a hole is made in the ground; film or capillary water,— that which may be compared to what is held by a sponge, and hygroscopic water,—that which cannot be separated from the soil particles except by artificial heat. Of these, only two kinds are of much practical importance to the farmer—free water and film water. I shall endeavor to point out the necessity of getting rid of free water to a depth of about three feet, and retaining all the film water possible above that depth. For accomplishing this two-fold object, underdraining is the most important and practical means.

It may be well to consider here for a few moments the source of supply and demand of moisture in agriculture. It is a well-known fact that all farm crops use much more water than that which falls on the surface during an average growing season. In 1905 experiments were conducted at the Ontario Agricultural College, Guelph, by planting wheat, oats and barley in crocks set in the earth in such a manner as to catch all the rainfall. Water was added when the plants showed signs of wilting, and the result was that during the time the wheat was maturing, 10½ inches of rain fell, and 12 inches of water had to be added. While the oats were maturing, 8 inches of rain fell and 13¼ inches were added. While the barley was growing, 8 inches of rain fell, and 10½ inches were added. Thus we see that these crops, during the period of their growth, used approximately two and one-quarter (2¼) times as much water as fell in rain. It is stated that the plants did not grow as large and strong as those under actual field conditions. We are, therefore, safe in assuming that field crops used as much, or even more, than those in the experiment. Therefore it is evident that if we are going to grow crops successfully, we must handle our soil in such a manner as to retain a large amount of the spring and autumn rainfall. The season of 1905 was a very dry one in Ontario, therefore the same experiment was tried in 1906, which proved a very wet season. The result was that, although moisture was much more abundant, the plants did not use nearly as much as during the dry season. This, we presume, was due to the fact that there was much less evaporation through the leaves. This experiment also went to show that in a wet season a large amount of water was carried away by drainage.

It is a well known fact that excessive water standing in the soil for 48 hours or more is very injurious to plant life. We, therefore, see that, in addition to being compelled to retain a large proportion of the spring and fall rains, we have to make provision to get rid of the surplus quickly. For combining these conditions, underdraining is the great remedy and for some soils, at least, is the only remedy.

It is a matter of common knowledge that soils which do not suffer from excessive rains also resist drought well, the reason being that the soil is of such a nature as to retain large quantities of water and has good natural drainage. If we study the condition of these fields, we find that they are composed of a comparatively loose soil in which the particles are neither too fine or too coarse. Take, for example, two tubes and place exactly the same quantity of soil in each, making the soil as compact as possible in one and leaving it loose in the other. Add water carefully to these until the soil is completely saturated, when you will find that the tube with the loose soil contains 35 per cent. more water than the tube with the compact soil. It will also be observed that any surplus water added will drain away much more quickly from loose than from compact earth. In many of our fields these conditions can be obtained by a proper method of cultivation. For our fine clay soils, however, underdraining is the only remedy. These soils hold water so tenaciously during our cold spring weather, and are so seriously injured by working when too wet that the only time when they could be improved by cultivation is during the time when they must be growing crops if they are going to yield any return. These soils also suffer severely from drought for when the weather becomes hot and dry they lose water rapidly by evaporation. As they lose water they shrink, causing numberless cracks or fissures to form on the surface. These fissures admit air and increase evaporation, themselves becoming large and deep, breaking the roots of plants, which, owing to unfavorable conditions, were compelled to stay near the surface, and exposing them directly to the air thus destroying all possibility of a profitable crop. From these soils underdrains take off the surplus water and permit seeding to be done several weeks earlier, an important consideration when a short season is one of our chief obstacles. Thus, when the hot weather comes we have a crop growing which shades the ground and, to a large extent, prevents rapid evaporation. Furthermore, as the excessive water is withdrawn the air penetrates and warms the soil. The air and heat assists nitrification and decomposition and liberates plant food. The roots of plants go after food and get a firmer hold on the ground and withstand drought much better. Moreover, as these rootlets die they leave small capillaries in the soil which absorb and retain the rainfall that formerly ran away and was wasted. Thus, in a few years after underdraining, the entire nature of the soil is changed. You cannot only cultivate it much earlier, but there is not the same danger of working it when slightly wet.

Another great advantage of carrying off surplus water by underdraining is that it removes the necessity of its being evaporated and consequently, saves a vast amount of heat. The reason why wet soils are called cold is due to the heat lost by evaporation. It takes as much heat to raise a pound of water one degree as it does to raise a pound of dry sand ten degrees. Again, it takes 5½ times as much heat to evaporate a given quantity of water as it does to heat the same quanity from the freezing to the boiling point. When it is considered that the amount of water lost by evaporation from a reservoir in 24 hours has equalled 140 barrels per acre, we get some idea of the great amount of heat lost in this process.

There are various other advantages connected with underdrainage that space does not permit me to mention. There are, however, other conditions where underdraining is necessary that I must mention before closing. Oftentimes portions of fields which in themselves would not require draining are rendered unfit for cultivation by having water from an adjoining fiefd perculate through them, thus making it impossible to cultivate the field, as a whole, until this portion has become dry. The greatest possible benefits to be derived from underdraining are to be obtained from such instances. Drainage in such cases differ from draining clay fields inasmuch as there is no rule by which you can calculate the number of drains required. My advice would be to put in a few drains and then watch the result. On the College Farm there is a field which gently slopes toward the centre, a wide portion of the lower part of which continues wet from such a source. This portion was drained, and I have since become convinced that a lesser number of drains would have accomplished the purpose. In other instances we find whole fields that are kept damp by water oozing from adjoining fields. In such cases one drain, and sometimes an open ditch, will relieve the difficulty. Sometimes springs will keep a large portion of a field wet. In such instances great care should be taken to get at the source, as it often happens that the portion affected is quite a distance from the seat of the trouble Finally, there are swamp lands which usually require pretty thorough draining and furnish our most productive fields when properly handled.

Drainage practice must be adapted to each tract of land to be improved. In other words, each farm, and in many cases each field, pre-

sents a special problem.

In conclusion, I would say that, if you contemplate improving your farm in this manner carefully consider the reasons why your fields need draining. Do not underdrain a field, however much it may require it, unless yod intend to cultivate it intelligently afterwards, and do not hesitate to drain a field to which you devote your best efforts and which, for any of the reasons here mentioned, frequently fails to give you satisfactory returns.—F. L. Fuller in 1909 Report of the Nova Scotia Department of Agriculture.

Fruit Crop Report.

APPLES.

Apple trees everywhere have had an abundance of blossoms. Judging from the heavy bloom that is reported on nearly all varieties, the present indications are for a large crop of apples.

District 1.—The bloom is showing for a good crop, in both early and late varieties. The early varieties, particularly were loaded with bloom, and are now well 'set.' Of the winter varieties, the Greenings are especially promising.

District 2.—The prospect is for a moderate to good crop. The early and fall varieties have blossomed heavily. Of the winter varieties, the Greenings for the most part are well loaded with bloom. Baldwins and Spies are showing a good bloom also. In some cases, varieties that bore heavily last year have a light bloom.

District 3.—There has been a very heavy bloom in the large winter apple section along the north shore of Lake Ontario. The present indications are for a full crop of nearly all the leading commercial varieties. In the counties of Northumberland, Durham and Prince Edward the outlook at the time of blossoming is the most promising for several years

In the Georgian Bay District there is every indication of a fair crop of apples. Some varieties have blossomed very heavily. Spies and Baldwins, which bore heavily last year, are not showing such a plentiful bloom.

District 4.—The bloom is very heavy in the Ottawa and St. Lawrence valleys. There is also a heavy bloom in District 4 of Quebec. The Fameuse, the leading commercial variety of this section, at present promises to be somewhat heavier than last year.

Districts 5 and 7 are not far enough advanced to form an estimate of the crop.

District 6.—Present indications are for a moderate to good crop of apples. There was a severe frost in the Annapolis valley at the end of April, which injured the fruit buds in some localities. Although the effects of the frost are not considered serious generally, the bloom is reported considerably shortened in some parts of the valley.

District 8.—The prospects for the apple crop are good in Prince Edward Island. The blossoms have just opened and the trees are full of bloom.

Districts 9 and 10.—Apples have set well in British Columbia, and at present a full crop is looked for.

PEARS.

Pears have blossomed heavily everywhere.

District 1.—In the Niagara district and the counties along Lake Erie there has been a very heavy bloom, and all varieties seem to have set well. There is little damage reported from frost in the Niagara district and in Norfolk county but there is some complaint of frost injury in the Essex peninsula.

District 2.—There has been a fine show of blossom throughout this district. It is impossible yet to estimate any damage that may have been done by the late frosts.

His Majesty King George V—Our New King.

District 3.—Pear trees have blossomed profusely in Prince Edward county and the counties along the north shore of Lake Ontario. A large crop is indicated.

There is a prospect also of a good crop in the Georgian Bay district.

District 6.—There has been a full bloom in Nova Scotia, but late frosts have made the prospects somewhat uncertain.

Districts 9 and 10.—Pears in British Columbia have set for an abundant crop.

PLUMS.

Plum trees generally have been heavily laden with bloom in the commercial plum sections of Ontario and in Nova Scotia.

The effects of the severe late frosts are not determined, though slight injury is reported to Japanese varieties in the Niagara district, and more serious injury to nearly all varieties in the Essex peninsula and Nova Scotia.

The prospects are good in British Columbia for plums and Italian prunes especially.

PEACHES.

The outlook is bright in the Niagara district. There was a splendid show of bloom. Although it was cold and wet during blossoming time, it is reported that the pollination was successful. Curl leaf is beginning to appear in some orchards on account of the wet weather early in May.

In the Essex peninsula it is reported that the peach blossoms were injured to quite an extent by late frosts. The trees, however, were so full of bloom that the prospects are still for a good crop.

The outlook for peaches and apricots in British Columbia is excellent.

CHERRIES.

Cherries blossomed well in all sections.

District 1.—In the Niagara district sweet cherries are now quite well advanced. Some damage is reported from frost, though not serious. Sour cherries have been exceptionally full of bloom, and promise a full crop. In Norfolk and Elgin counties the present outlook is for a good yield. In the Essex peninsula the bloom was heavy on both sweet and sour varieties, but damage from frost is reported in some localities, especially to sweet varieties.

Districts 9 and 10.—All varieties promise exceptionally well in British Columbia, though some damage from late frosts is reported in the interior valleys.

SMALL FRUITS.

Small fruits have come through the winter well, and have blossomed heavily.

Strawberries, raspberries, blackberries, currants and gooseberries are promising well in the Niagara district.

In the Essex peninsula and the counties bordering Lake Erie, strawberries are reported in some instances considerably injured by late frosts, particularly among the early varieties.

In Districts 2 and 3 a number of correspondents report that the first bloom of the early strawberries were blasted in the blow by frost. The later varieties are probably safe unless they should be caught by an unusually late frost.

In the Maritime Provinces, small fruits are looking well.

There has been a splendid show of blossom in British Columbia, and small fruits will be plentiful. The first consignment of local strawberries from the lower mainland were received on the Vancouver market May 21.

GRAPES.

Grapes wintered well in the Niagara district, and are looking very thrifty and vigorous. They were rather late in budding and are likely to escape serious damage by frost. All varieties are looking very promising.

TOMATOES.

Tomato plants are not so forward as usual on account of dark, cool weather. There has been considerable 'damping off' of plants on account of dull weather, and some reports of inability to fill orders.

A great many plants have been set out in the Niagara district, but some of the earliest were nipped by frost.

Heavier plantings for commercial purposes than in former seasons are reported around Leamington in the Essex peninsula.

INSECTS.

Insects are somewhat more numerous than last year at this time.

The Bud Moth is very much in evidence throughout all the fruit sections. very strong arsenical poisons will have to be used just as the buds are bursting to control the Bud Moth.

The Cigar Case Bearer has also been hard at work on apple foliage this spring. Spraying with arsenical poisons to control the Bud Moth will keep this insect in check.

The Oyster Shell Bark Louse is reported to be on the decrease where regular spraying is practiced, but decidedly on the increase where no spraying is done.

The Aphids are noticeable, but are not so prevalent as last season.

The San Jose Scale is increasing in southern Ontario, except on trees that have been kept well sprayed with lime and sulphur.

The Tent Caterpillars are very numerous in eastern Ontario, Quebec New Brunswick and British Columbia.

The Canker Worm is plentiful in Nova Scotia, but it is not so bad as last year.

A large number of nests of the Brown Tail Moth have been cut from the trees in Annapolis Valley and destroyed.

FUNGOUS DISEASES.

Peach Leaf Curl has appeared in the Niagara district, and is likely to be very bad in peach orchards not properly sprayed with lime and sulphur.

Pear Blight is showing already.

Black Rot Canker is prevalent in District 3.

The European Canker, which has become a serious menace to fruit trees in Nova Scotia, is said not to be increasing as rapidly as usual this season.

FOREIGN FRUIT CROP PROSPECTS.

Great Britain.—The season, on the whole, is earlier than usual in Great Britain. There has been an abundance of bloom on all varieties of fruit. The latest reports received indicate a prospect for at least an average fruit yield in England, though the weather was very cold during the latter part of April, and damaging May frosts are always probable.

United States.—In the Ben Davis group of states in the middle west, the apple crop will be very light on account of the severe frosts late in April. There has been also heavy damage to fruit in Michigan, Ohio and Colorado. It is asserted that sufficient bloom was left uoharmed to predict a fair crop, though considerably below the average.

The prospect for the apple crop in the New England states is very good. Late frosts did some damage to early varieties of apples, but the later varieties were not far enough advanced to be injured.

There was some injury in parts of New York State to pears, plums, cherries and early apples, but on the whole very little damage has resulted from frost in the states of New York and Pennsylvania. In the latter state indications for a good apple crop are reported.

The prospects in Oregon and Washington are reported promising for a crop above the average.

DIRECTIONS FOR SENDING SPECIMENS.

Orchardists are urged to examine their trees and plantations very closely for insect and fungous pests. Specimens of insects, if dead, should be wrapped in paper or cotton and inclosed in a pasteboard box. If the specimen is particularly soft it should be packed in cotton saturated in alcohol. Whenever possible grubs caterpillars and so forth should be packed alive in a box together with a supply of their food; air-holes are not necessary. Particulars as to where the insect was found and the nature of the damage which it is doing, whether to leaves, buds or stems, are frequently of very great importance. Send for information and identification of specimens to:—

Dr. C. Gordon Hewitt, Dominion Entomologist, Central Experimental Farm, Ottawa.

The Fruit Districts of Canada.

Those who would get full value from the Fruit Crop reports, would do well to study closely the nature of the crop in each of these districts.

District 1.—Grows a large quantity of apples of good size, fine color and excellent quality. Their one defect is that frequently even the winter varieties ripen so early in the fall that they deteriotate very materially before the cold weather of the early winter sets in and, therefore, unless they are placed in cold storage as soon as they are matured they are apt to show a large amount of waste if any attempt is made to keep them during the winter months. The apples, therfore, in this district must, for the most part be regarded as fall and early winter varieties unless cold storage facilities are provided to enable the holding of them for winter shipping stock. Consequently, if it should appear that there was a large crop in District No. 1, it would not materially affect the quantity of winter shipping apples, but would be counted in with the fall and early winter apples of the other districts. To this we might make the possible exception of such varieties as the Ben Davis, Stark and similar varieties that are very little grown in this district.

Her Majesty Queen Mary—Our New Queen.

District 2.—Grows excellent winter apples. It is far enough north, or the elevation above the sea level is such, that the winter varieties like the Greening, Baldwin, Spy and Russet, ripen just as the early winter sets in; consequently, these varieties may be picked and stored with advantage, as winter shipping apples in ordinary storage.

A very marked peculiarity of the district is that orchards, though numerous, are small. The district is a very large one and apples can be grown to perfection in any part of it; but the farmers are engaged, for the most part, in mixed farming. At three or four points selling associations have been formed, and wherever these have been organized apple growing is exceedingly profitable.

District 3.—Grows an equally good quality of winter apples; but the orchards are larger and the fruit-growers are taking better care of them. Pruning, spraying and cultivating are common. The varieties planted are fewer in number and confined almost exclusively to winter apples.

Another significant feature that must be taken into account in the future apple reports is that planting is being done quite freely in District No. 3. The number of young trees under ten years old probably exceeds the present plantings. Consequently, each succeeding year there will be a large addition to the aggregate of the crop coming from District No. 3 as the result of new orchards coming into bearing. There will be a tendency, therefore, to underestimate the crop from this district on this account.

District 4.—This district has a large quantity of apples of the Fameuse and Wealthy type. Te climate is too severe for the standard winter varieties grown in Ontario. The varieties, such as the McIntosh Red, Wealthy, Wolfe River and a number of other hardy varieties, are all fall and early winter apples. In estimating the apple crop, therefore, consideration must be given to this fact, that a large crop of apples in District No. 4 will materially affect the market only during the fall and early winter months, and even in such cases the apples grown in this district are more desirable for desert purposes than cooking purposes. They, therefore, occupy a special position in the market.

District 5 has comparatively few trees. The quantity of fruit raised here is not enough for home consumption, so that it need scarcely be taken into consideration in an estimate of the crop for commercial purposes. This district includes New Brunswick. The possibilities of orcharding in the St. John valley are so great that there is a probability in the future of having to make a separate division of this part of district 5 to secure greater accuracy in the estimate.

District 6 is an exceedingly important one in apple production. It includes the four counties of Hants, Kings, Annapolis and Digby in Nova Scotia. It would be quite possible, considering the high state of cultivation in which a large number of the orchards are kept, to have a surplus of five or six hundred thousand of barrels for export.

It will be readily seen that this is a very important fruit district in estimating the marketable crop for any particular year. The Gravenstein forms the largest bulk of their earliest shipments. This variety, however, is being less planted, and the district is becoming more and more confined to the winter shipping varieties. The Blenheim Orange type appears to flourish here better than the varieties so successful in districts 1, 2 and 3. These are extremely popular in the English market, and, therefore, are always likely to be in good demand.

District 7 embraces the rest of Nova Scotia not included in District No. 6. A few isolated and protected valleys, particularly in the counties of Lunenburg and Digby, are demonstrating their capacity for growing fruit in commercial quantities; but as a whole it may be said that there is not enough winter fruit grown for home consumption, nor is there sufficient quantity to affect appreciably any results obtained from the other divisions.

District 8 includes Prince Edward Island. There is a small quantity of early fruit grown here for export, which may increase somewhat in the near future, but it is not enough at present to appreciably affect the market. This district still imports winter fruit for home consumption.

District 9 includes the valley of the Fraser from Lytton southward, the lower coast line and the Island of Vancouver in British Columbia. This is a mild and moist climate. favorable to fruit growing which is carried on under very different conditions from those prevailing in District No. 10.

District 10 includes the interior valleys of British Columbia, which have a comparatively dry, warm climate. Irrigation is required in many of these valleys, and it is therefore desirable that they should be grouped together, inasmuch as though they differ among themselves slightly, yet for commercial purposes the fruit is similar.

Districts 9 and 10 are becoming much more important factors in estimating the total crop of the Dominion.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmer of the Maritime Provinces.

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July ....12—26

GOOD SCHOOLING IN THE COUNTRY.

This country is often advertised as a land of opportunity. And to a great many people, the majority in fact, it has been as good as its promise. But there is one class of its citizens to which, in one respect at least, the prophecy has scarcely been fulfilled. It can be honestly questioned if to the average country boy or girl of school age this has been a land of opportunity.

It is true that difficulties of education are inseparable from pioneer experience. We cannot expect to have all the advantages of higely organized society in a day. At the beginning, in any rural community, there are certain obstacles that must be faced. Farms are scattered, and many of them are occupied by men who have no children; roads are unimproved, and money to build school houses and pay for teaching is hard to raise.

But have not the difficulties of pioneering been frequently made an excuse for poor schooling advantages even after they have served their day as a real reason for lack of proper facilties? In other words, are there not many districts that might have much better schooling privileges than they have, if the residents only honestly faced the issue?

We think so. We believe that in many country places there is the need for an awakening all round on this question. It should begin with the parents. The fathers and mothers of the children of school age could have moderately fair school privileges in almost any district, if they went at it in earnest. Do they take a real interest in school affairs? Do they endeavor to inspire the teacher by manifesting enthusiasm over the way she is doing her work rather than depress her by criticism? Do they encourage the trustees in the feeling that any effort they may put forth is worth while? Do they try to make the school grounds and the school house commodious and attractive? Is the school well equipped? Is it the place where any capable teacher would delight to work; or is it unattractive and depressing? Some schools would give the blues to any teacher that had ambition.

It is not grumbling nor is it discussing an idle question to put forward these queries. It is the natural duty of every father and mother to give their children as good an education as is reasonably possible. Yet some people seem to carry their burden of responsibility on this question altogether too lightly. They keep a boy or girl out of school to work at home if they think that he or she can do twenty-five cents worth of labor. And it is not on the farms of poor parents alone that this is done. Put into plain English, these parents steal from their own children their natural birthright. The road to learning seems to inflect too heavy a charge. Yet it is true that ignorance demands a higher toll of any family than does education. Isn't this true?

We believe that a better day in rural education is at hand. We look forward to the time when there will be more consolidated schools, which will give a better service than most of our small country schools are now doing. Then, too, the teachers are being better trained. And gradually the standard of school equipment is being raised. There is going to be a more practical turn given to much of our highschool work.

This is all very encouraging, of course, but after all, it does not get rid of the stubborn fact that in many places farmers are not permitting their children properly to enjoy even what limited school advantages there are already in existance.

If there is to be any permanently better basis for agriculture, a large part of the more substantial work looking toward the improving of conditions must begin right here. If farmers as a class are to be leaders in legislation or in social or economic reform, their capacity for leadership must, as a general principle, be based upon fundamental intelligence. Any man can see that this holds true in connection with his own generation. Will it not, even to a greater extent, hold true in regard to the next generation as well?

BE SOMEBODY.

The world is wide. If you wish to be somebody "pitch in." The brave always have friends. Where others have gone you can go. If the old track doesn't suit you, make a new one; somebody will walk in it. Don't hurry too fast, especially till you know the road or become acquainted with your team. Mind your own business and look after it yourself. Don't stop to gossip. You may grow weary, but remember this is not a world of ease, and rest lies beyond.

Success is never obtained in a country like this without effort. If you fail once, try again. If you fall down, get up. If it is dark, strike a light. If in the shade, move around; if there is a shade on one side there is sure to be sunshine on the other. It takes longer to skin an elephant than a mouse, but the skin is worth something. Never be content with doing what another has done—excel him. A trade is a good thing to have; it is better than gold—brings a larger premium, but to make a premium, the trade must be perfect. Determine in your mind to be a good workman. Never slip your work. Every job you do is a sign. Poor signs are against success. People always speak well of a man who minds his own business, and who seems disposed to be somebody. This is a queer world; many people are watching us, and help often comes when and from whom we least expect. Confidence is the safe in which men often deposit rich treasures, and as you prove worthy so will your reward of success be.—Canadian Workman.

THE SUCCESSFUL FARMER.

Ever and anon we hear of the successful farmer and in imagination we wander away to broad-tilled acres, large red barns, large houses with beautiful lawns, fine stock, etc., etc., but we do not stop to consider the enormous amount of real hard work that was entailed in bring about this condition of things. There are no hard and fast rules whereby success can be assured in this great profession, but there are certain principles that make for success and to these the following bear loyal tribute :

I shall name a few elements which a farmer cannot well do without to be successful. Make arming a specialty. I have been farming for twenty years, and I never have found much time to devote to any other profession, I have stuck close to agriculture and stock raising, and I think I have been rewarded for it. I well remember when I was a small boy, of hearing the saying "Jack of all trades and master of none." Ever since I have kept that in my mind. I would rather be a special somebody than a general nobody. The different sciences are so deep and wide that one person cannot master them all, or even many of them.

A successful teacher makes teaching a specialty, a successful lawer makes the legal profession a specialty. I know there are some good farmers who are lawyers, good teachers who are farmers, and goood farmers who are doctors, but if you should ask them if they thought they would not be more succesful if they should make their chosen profession a specialty they will tell you yes. The most successful men we have today in any profession are specialists. This is an age of specialists.

Many times since I have been farming, other things have been presented to me with offers of good wages, but I could not spare the time off the farm, which needes my undivided attention. The right thing needed to be done right at the right time, which if I failed to do, and do well, my work was not satisfactory to myself. I believe the keynote to success in farming is to do the right thing at the right time. I have never well done anything but that I was rewarded, and well pleased with my work.

THE DEMAND FOR GOOD STOCK.

The demand for good stock is increasing, is the causal remark from the breeder, and the dealer and fancier. This, in a measure, can be substituted by the increased number of breeders of pure-bred stock.

There is merit in pure breeding, in pure-bred animals, and in the effort to build up and advance quality in these animals. It is being done each year, the standard is getting higher, with the really meritorious breeders. How is it with the cross-bred breeder; what has he to show? Where are his results? Has he got a fixed type of animal produced from his cross that is creditable or that he is proud to own, or has he been spending his time and efforts in producing a scrub?

When a breeder or fancier becomes an experimenter, gets a beef idea and a dairy idea into his head at the same time, and to such an extent that he is persuaded to cross a beef breed and a dairy breed of cattle in order to secure a better individual or a better combination, he is only lending himself and his efforts to the creation of scrubs.

It is not necessary that one have a scrub to produce a scrub. This can be done readily by using pure-breds of different breeds, and the greater the divergency in the type and character of the breeds used, the better and quicker the foundation is laid for scrub breeding. It is this cross-breeding experimentation that is responsible for the present day scrub and the holding back of a more rapid improvement in the general stock of the country.

THE FARM DIARY.

We know a young man, now engaged on his own account, who served some time as a pupil under a successful practitioner. When he started as a pupil he was advised to keep a diary of the various operations that were performed day by day, and being a careful lad he did. According to his own testimony, when the young man first started farming for himself there was no book in his whole library which he found as useful as the diary he had kept when a pupil, and we willingly accept the statement. In our opinion, not only is it advisable for pupils to keep diaries, but experienced farmers also, because it is always helpful to be able to turn up a record and see when certain operations were performed the previous year. It is impossible to keep the whole details of a farm in one's mind; but if one jots down the principal operations as they are performed there is always a record to refer to. A diary suitable for the purpose can be obtained for a few pence, and the making of the entries does not involve much time nor a great deal of trouble.

Percy Moore B. S. A..
Dairy Commissioner for British Columbia.

Nova Scotia Boy Dairy Commissioner for British Columbia'

The subject of the above sketch is Percy Moore, B. S. A., son of S. J. Moore, Truro, N. S., the popular Maritime representative of the Seed Division, Ottawa.

Percy Moore was born and brought up on a well equipped and successfully managed dairy farm at Shubenacadie, N.S. Quite early in life he took an active part, with his father, in the various phrases of work incidental to growing feed, feeding and caring for a pure bred herd of dairy cattle. He spent two years on the staff of the Travelling Dairy School in Nova Scotia where his practical demonstrations and suggestions were well received as coming from one who had done the practical work that links so well with thery.

He spent two years at the Nova Scotia Agricultural, College which is doing so much for our young men who remain at home and for those who go abroad. A certificate of graduation from the Nova Scotia Agricultural collegeis a recommendation for any young man who takes the proper care of himself and who is willing and anxious to advance and do what is right.

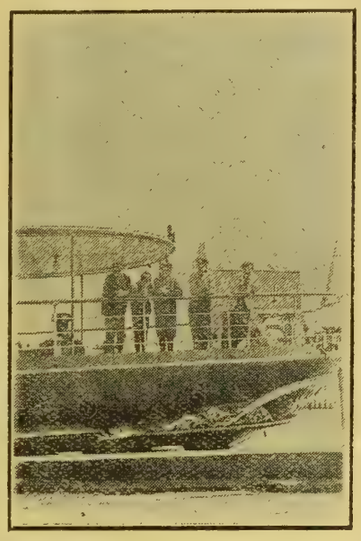
After completing the course at the Nova Scotia Agricultural College, Mr. Moore spent a summer as manager of the St. John branch of the Maritime Dairy Company, t after which he took a two year course at the Ontario Agricultural College, Guelph, from which he received the B. S. A. degree in 1909, after which he received an appointment on the Agronomy Staff of the South Dakota Agricultural College where he spent the past year and where the "Come up higher" ca l reached him from British Columbia, where he now holds the position of Dairy Commissioner. (A good example for other young men to follow). While we would like to see young men of Mr. Moore's calibre remaining in the Maritime Provinces we are glad, yea proud, to see our young men stepping forward. We congratulate Mr. Moore on his appointment and feel confident that his cheerful disposition, his practical experience and his college training will win many friends for him and make his work a success.

Blackleg of the Potato.

Professor W. J. Morse of the Experiment Station at Orono has published Bulletin No. 174 from the station, giving an account of a new disease which is appearing to a limited extent among potatoes grown in Maine. Prof. Morse gives the following summary of this disease in his bulletin which we re-publish in full.

"Blackleg is a bacterial disease of the stem and tuber of the potato. A similar appearing malady caused by bacteria has been reported from Canada, and another from England, Germany, France and other parts of Europe. Preliminary studies of the organisms associated with the disease indicate that they are closely related to those already described as a cause of similar troubles elsewhere, but whether they are identical with any of the described species of bacteria is not fully determined.

"The attacked plants are usually unthrifty, light green or even yellow, and undersized. The branches and leaves have a tendency to grow upward forming a rather compact top, often with the leaves curled and folded up along the mid-rib. The most characteristic thing about them is the inky-black discoloration of the stem, at or below the surface of the ground, but frequently running up the stem from one to several inches above ground. The seed-piece from which the attacked plants spring is invariably attacked with a soft-rot



Aboard the Northumberland.
One of the Charlottetown Steam Navigation Boats.

and the disease appears to start on the stem at its junction with the diseased seed tuber. The germs of the disease are capable of causing a rapid decay of the young tubers, and these are sometimes attacked also.

"The evidence thus far obtained indicates that blackleg is largely distributed by means of germs carried in wounds, cracks and decayed areas of seed tubers. On acconnt of the readiness with which the organisms are killed by drying there is little to fear from sound, smooth stock, but this should be treated with a disinfecting solution as a matter of precaution. There is some reason to think that blackleg was introduced into Canada from England and from there to the United States.

—"Blackleg is apparently becoming quite widely distributed throughout the eastern part of the United States. In most States it is not common enough to attract attention, and in no region has it done much damage, although it may become a serious pest in some sections. It is not believed that it is likely to do much damage in Maine, except in low, wet soils or during abnormally wet seasons. The similar appearing trouble caused by Bacllius solanisaprus Harrison is widely distributed in Canada and is there claimed to be of considerable economic importance as a cause of tuber decay.

"The propogation and spread of the disease probably can be controlled largely by tne selection of seed from fields free from the disease, the rejection of all seed tubers which have wounds, cracks or decayed areas and treating the remainder with corrosive sublimate or formaldehyde solutions, or with formaldehyde gas as is done for potato scab. It is not known whether or not the disease germs will remain alive in the soil to infect future crops of potatoes, but as a precautionary measure the land on which the disease occurs should be kept in grass, clover, cereals for as long a time as possible before planting it to potatoes again."

Swamp and Muck Soils.

Of late years cousiderable attention has been given to the study of swamp or muck soils, including the chemical compositing, manurial treatment, reclamation and permanent improvement. In the province of Ontario alone there are thousands of acres of such soils, many of them valueless and abandoned, others let unreclaimed, large areas under cultivation but yielding poor crops, whilst others again are some of the richest and most productive soils. The economic importance of this question, will, therefore, be clearly recognized when we remember that according to the report of the Ontario Agricultural Commission appointed in 1881 "to enquire into the Agricultural Resources of the province of Ontario, the progress and condition of agriculture therein and matters connected therewith," almost every township is reported to have some such land, the estimated acreage varying from a few hundred to 40,000 or more. In the aggregate, there must have been hundreds of thousands of those swamps.

Owners of such land will be interested in Bulletin 178 of the Ontario Agricultural College, since it deals with the "Character and Treatment of Swamps or Mucky soils." The bulletin is prepared by Prof. W. P. Gamble and A. E. Slater. A brief summary of the bulletin follows:—

I. As a whole, most swamp soils can be made to be some of our most fertile

I am a Prince Edward Islander
My dad is a Maritime Farmer Subscriber.

lands, if properly drained and cultivated.

2. That potash and phosphoric acid are usually more or less deficient, and that the soils readily respond to an application of commercial fertilizers.

3. All attempts at the cultivation of peaty soils begin with the drainage.

4. Certain crops are particularly well adapted for growing on these soils, while others do uot do so well.

The following suggestions may be of value as briefly summarizing much that has been dealt with in the bulletin:—

1. A deficiency of potash (K20) and of available phosphoric acid (P205). both of which frequently need to be applied in the form of commercial fertilizers.

2. An abundance of nitrifying germs which act on the inert nitrogen present in the organic matter and convert it into ditrates, a form readily assimilated by plants. The application of farmyard manure or garden loam is needed in this case, together with frequent cultivation,

3. A water-logged condition owing to the permanent water table being too near the surface, and thus checking root development, and preventing areation of the soil. Lower the water table by efficient drainage.

4. A dry loose condition of the soil which results in lack of moisture through inability to raise water by capillarity. This condition frequently results from too rapid drying out of deep areas of muck. Gradual draining is desirable.

5. The laying of tyle in the muck itself, which results in imperfect action of the drain, owing to the inability of the water to penetrate into the drain through the pores of the tile.

6. Acidity, owing to the presence of an excess of organic acids. This condition is not common with Ontario muck soils. Liming is the remedy.

7. The presence of injurious plant poisons in the soil, as the lower oxides of iron. Frequent cultivation and exposure of the material to the air results in oxidation and removes the evil.

8. An undecomposed condition of the soil and the presence of much woody fibre, and thus a general coarseness of the soil particles. Frequent cultivation and the applicatlon of farmyard manure has a beneficial action, hastening decomposition.

8. The lodging of grain and a light and poorly filled ear, due to the excess of nitrogen over mineral constituents. An application of potash and phosphoric acid is beneficial.

Scab. Early and Late Blight.

The early blight, late blight and the scab annually cause considerable loss to the potato growers of Maritime Canada, and hence it is very important that the treatment of seed potatoes previous to planting should be more generally understood.

POTATO SCAB.

The main source of this disease is generally scabby seed and like most fungus disease when once carried to the soil it spreads very rapidly. There is no doubt that many potatoes which leave the field quite free from the disease become infected in the place of storage by spores from tubers on which the disease had developed in the field. As potato scab spores will retain their vitality in the soil for as long as five or six years, it is not unusual to plant clean seed and still harvest a scabby crop.

TREATMENT OF SCAB INFECTED SOILS.

It is important to remember that the best results from the treatment of the seed cannot be expected unless reasonable precautions are taken to keep the soil clean. Bags, baskets, boxes, barrels, and implements that have been in contact with scabby seed or infected soil should be thoroughly disinfected

(Continued on page 573.)

A Couple of Prince Edward Island Braves.
Prince Edward Island Still has a few Scattered Colonies of Indians.

The Apple in Commerce.

In referring to the apple, or any other product of the country, as contributing to the credit of commerce, it would be well to give some consideration as to the vital importance of commerce in its ruling position in all public affairs. Its paramount issues cannot be overestimated. The life of the nation is nourished and sustained by wholesome fruits of the enterprise and industries emanating from commercial circles. The work of controlling the commerce of any country enlists aid from the strongest intellects and clearest mental perceptions associated with the highest order of executive abilities.

When apples were first grown in this country the idea of commercial orchards had bot been conceived. The fruit was grown, and then in very limited quantities, for fqmily use. If Johnny Appleseed, who travelled with his bag of seeds, which he scattered and planted years ago through the Middle West, could be made to realize the fruits of his humble endeavors he no doubt would be astounded at results.

We trace a similar course when following in the wake of the apple in commerce. Starting from smallest tiny seeds, which in many instances were dropped only by accident, slowly and surely came a forming and spreading of the roots obtaining firmest holds on the fertile soils; then came the rising of tender plants, swelling in strength of trees and in time spreading branches laden with fruit fit for the Gods.

While the advent of such advantages were warmly welcomed, the propagating of the trees at the start was only for the purpose of supplying family wants and luxuries. Gradually the sphere of services widened. Sufficient number of trees were planted to bring more or less of a revenue for farmers from neighboring markets. A steady demand for the fruit called for orcharding on larger scales and passing years have witnessed planting of large and countless commercial orchards in available apple belts all over the country. If the exact area covered by orchards in the United States could be given no doubt a great surprise at its extent would be witnessed. In order to furnish stock for new orchards a peremptory demand was made for nurseries, which are again occupying large tracts of the most fertile and arable. Taking the land for orchards, nurseries, homes for fruit growers, and for erection of the various and diversified buildings required by the apple industry in the country it would reach millions of acres.

It would not be possible to trace the tributaries of all currents through which millions flow like grains of sand as they come with sweeping force swelling the strong tide of the apple in commerce, flowing and spreading into every nook and corner of the country. It can be readily seen, however, that its powerful and increasing and voluminous force is boomed by billions of best American money.

In viewing the trial balance sheet of the apple in commerce for the past several years do we not see figures that are almost paralyzing in their effects? Turning back to 1896 figures show that the annual crop for United States for that year was 69,000,000 barrels. The largest annual crop since that date was in 1900, when 47,000,000 barrels were harvested. There has been a general failure of the crop in the aggregate in the passing years, and the closing year, 1909, shows 23,000,000 barrels the lowest degree reached by the descending mercury registering each annual public report.

What can be said about progress, development and advancement in the face of uncontrovertible figures? Probably there is fifty per cent. more capital invested in all courses of the apple in commerce now than in 1896 and then the approaching census will no doubt show that we have nearly 15,000,000 more to feed at home than in the year mentioned; added to this is the annually increasing foreign demand for American fruit, which steadily grows in favor on the other side of the ocean.

Bear in mind we are discussing the general output of the apple crop and not the result of intelligent and industrious individuals who stand and shine as beacon lights in all directions of this vitally important industry. We concede apparently overpowering obstacles have caused many defects. It can be truthfully said, however, that there is no royal road to success, neither in industrial pursuits nor professional careers of any character. In all strifes for existence we must either conquer or surrender.

It is not necessary to say that I have been referring to the annual apple products in the aggregate. We are not unmindful of the crowning success worthily won by the wisely directed efforts of a countless host of individuals. Without the rich rewarding of their earnest toil it would not have been possible for us to enjoy the magnificient pictures, grand results, placed in the most alluring light of all beauty and loveliness before our eyes to-day. But where are the thronging multitudes of failing orchardists who must go to the left, and to be generally left before the tribunal from which there is no appeal?

A conservative estimate would place about 75 per cent. of the American orchards as being too nearly barren to be profitable, and that means many millions of trees in different parts of the country existing only as cumberers of the ground. The owners of such orchards are rarely or never seen at a national, State or local horticultural meeting. They are somewhat like the sinners, who standing in the greatest need of salvation, are never seen inside of church doors. Those careless and indifferent fruit growers have no conceptions of the benefits and enjoyments conferred and enhanced around fires of enthusiasm that kindle and brightly burn at the national apple display we are witnessing. It is to be hoped that those present will return home bearing torches of enthusiasm, so well replenished with oil of hope and encouragement they will be able to throw clearest guiding lights for those groping and stumbling very far from paths of peace and safety.

Reflecting over consequences of the many dismal failures of apple culture years ago I suggested the importance of observing one day of the year as national apple day, making the date the third Tuesday in every October as that would be near the general average of time for harvesting the crops. The general recognition of the event has surpassed my most sanguine expectations. Nearly every national, State and district horticultural organization has cheerfully concurred and given the sanction of approval. During the short period of five years the observing of the annual anniversary, in some form or manner from the Atlantic to the Pacific, has been fruitful in results, although seeds dropped on different soils on that date may not have developed in wholesome vigor until months have passed. Such a state, however, should be commended. While we have Sunday set apart especially for religious teachings we should offer no objections whatever to the man who should happen to be moved by a good impulse, and should act in a becoming manner, though even for a while on one of the ordinary week days.

Future generations will be alert in applying far advancing methods in growing the great varieties of necessary and wholesome fruit. Then if perchance, the mines should be exhausted, a more concentrated attention will become fixed in developing fruit, the far greater wealth of the country and for which resources and opportunities are unlimited; then myriads of happy homes from which shall continually arise songs of contentment and blessing shall cover all present unoccupied districts, and in such centres will rise institutions establishing truth and justice, religion and piety, as crown jewels radiating all that sheds refining and elevating influences in the walks of life. Then the people will behold beautiful banners with the insignia of the apple blossom for our national flower, and exalted in foremost ranks, with brightly illuminated colors inspiring zeal, or highest aims and loftiest ambitions, will be delineated "apples of gold in pictures of silver."—An address to the Colorado National Apple Exposition by James Handly, Quincy, Illinois.

How a Michigan Orchardist Prunes Old Apple Trees.

The way not a few go at orchard pruning is enough to make a man cry out "don't." Singularly enough the branches that are most easily reached seem to be the ones on which the attack is made without much regard for the exigencies of the case or, apparently, a very clear idea of which ones should be taken. The effect of this general custom is to be seen in the greater part of the older apple orchards one sees, where the lower limbs are largely cut away and the tops of the trees are run up high in the air. Such trees are very difficult to reach with the sprays, and it is equally difficult and expensive to gather the fruit, if by chance any happens to mature.

These thoughts have been impressed upon the writer's mind by a thorough experience. An apple orchard recently came under his control that is probably fifty years old or more, and in which this same practice had been followed, so far as any pruning has been done. Fortunately, that work has been neglected, so there is now a better chance to bring the tops within a working distance from the ground. Last fall in gathering the apples it became necessary to lash two ladders together, one 24 feet long and the other 14, making a ladder probably 33 feet high. Two men were required to raise this into the trees, and then only a small number of apples could be reached before it became necessary to remove the ladder. And even this failed to reach the top of the trees in many cases. Only one man could work on it, but the time of both was required much of the time in order to move the ladder as needed. It cost 75 cents per barrel to put those apples up, whereas in other orchards where the trees were not so high the expense was only 40 cents. Those tall trees were partially beyond the reach of the spray pump as well, and the quality of the fruit suffered in consequence.

Now instead of following the common custom we are cutting away those upper branches and trying to bring those tops down where we can spray them and where the apples can be gathered at less expense. Of course, where the tops have become too thick, some of the lower branches that have been shaded are dead and must be cut away, but in the main there are enough thrifty limbs to make good tops lower down.

A thing that should be guarded against in these old orchards that have been neglected is excessive grafting when the branches were cut away to allow the scions to grow. I have seen pear trees killed after pruning. It is not the best policy to undertake to do all of the work that may be needed in a single year. Better take at least three years to bring the trees into proper shape. Some kinds of fruit trees, like peaches, seem to stand pruning, but not so with either apples or pears. I once saw a job of pruning done in an

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T. L. HARVEY.
Wolfville, - - N. S.

apple orchard where the lower branches were severely cut away after the common practice, and an old fruit man who chanced to be passing remarked that those trees would stand a chance of being barren for three or four years. His prediction proved true. I once rented an apple orchard of 160 large trees. It was the bearing year, and as the pruning had been neglected I argued that a thorough pruning before blossoming would relieve the exhaustion incident to a heavy bloom, as well as helping the fruit generally, so we gave them a good clearing out. Those trees blossomed well and set a promising crop of apples, but they began to drop soon afterwards and a very light crop matured, not enough to pay expenses, and I lost money on the deal. Other trees that same year that had not been so severely pruned, though otherwise given practically the same care, bore a good crop. A person may, indeed, secure a good crop of apples following a heavy pruning, but he takes chances in doing so, and in general the trees seem to resent such severe treatment. So it is wise to be moderate in this work.

Besides cutting down the tops we are cutting back the side limbs and shortening them in. In order to be able to reach all parts of the trees and do a thorough job of spraying it is necessary to keep the trees within a reasonable compass. After studying this matter for some time I have concluded that an apple tree can be grown as large as can be well handled within a limit of two rods and leave room between the trees for driving around. So in planting out new orchards I am setting the trees two rods apart each way. Where land is valuable as orchard lands are in these parts it is not economical to set trees farther apart than is necessary.—Edward Hutchins, in Michigan Farmer.

Better Care of the Orchard

If one were to judge by the neglected state of most apple orchards, such as are to be found in almost all sections, where general farming is practised, he would think that apple growing was about the last proposition that one should enter into. And where orchards are looked after as is the usual practice, it is, to say the least, doubtful whether or not returns are secured from these sufficient to justify their existence. We know, however, from actual experience—and countless men in this country and in many others of the province have proved it to their satisfaction—that the apple is a money maker if given the care that its proper cultivation calls for.

There are few farmers but recognize the advantage of pruning. A lot of them, on the other hand, have yet to find out that it pays to spray. Even many of those who do spray go about the work in a shiftless sort of way, their main purpose seeming to be to empty the barrel rather than to spray the trees properly. The apple crop is proving to be a profit maker with many of our leading farmers. All can make this crop as profitable as those who by virtue of up-to-date methods have succeeded in making it a leader.

Any farmer located in a district suitable to the growth of the apple tree might do worse than to consider the advisability of planting out more land to orchard. Our constantly expanding markets for the right kind of apples bid fair to remunerate all those of sufficient foresight to see the ulimate harvest that may be reaped from a good orchard. It is useless to plant an orchard, or even to maintain the old one, unless we give it proper care, and above all spray.

The principle part of every meal should be good Homemade Bread — made of "Beaver" Flour

There is more health and strength—more energy—more real food value—in good homemade bread, than in any other one article of diet.

Bread is the only food that alone will support life for any length of time. Good Home-made bread—made of "Beaver" Flour is the least expensive food—is the only food you can relish and enjoy three times a day, year in and year out—the only food that agrees with everybody and does everybody good.

The more bread you eat, the less will be your cost of living, and the more you will live healthfully.

The whole problem of economical living is solved when you eat more bread—wholesome, nutritious, delicious bread—made of "Beaver" Flour. Your grocer will supply it.

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THE T. H. TAYLOR CO. LIMITED, - 102 - CHATHAM, Ont.

Massey-Harris Mower.

Large, broad-faced Drive Wheels.

Four-powl Ratchets—no lost motion.

Finger Bar and Knife back are finest rolled steel.

Long wearing Plates on cutter bar.

Steel Clips hold knife in position.

Sections have hard edge and soft centre.

Raised Ledger Plates give long cutting edges—the serrated edges add greatly to the cutting efficiency.

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Should Hide Their Heads.

Unscrupulous agents pretend that complicated cream separators can be washed by "sousing 40 to 60 disks as one piece." The April 13th issue of a leading dairy and creamery paper contains statements from prominent creamerymen who condemn "sousing." The following extracts from these statements should make unscrupulous agents hide their heads:

"Wash machines every time they are used and not use the 'sousing' method advised by agents of complicated machines—this method being very injurious to cream." David W. Hodges.

"I have seen cheap separators it was an impossibility to clean. The greatest trouble is caused by misrepresentation, regarding work necessary to keep machine clean, by agents whose sole purpose is a sale." Glen Overton.

"A dirty and unsanitary farm separator is the start of bacteria it is hard to overcome." J. M. Taff.

"It has been demonstrated by tests that it does not pay to have the separator partly clogged with filth." L. C. Shepard.

These statements should decide you to get the only simple, sanitary, easy to clean cream separator—the

SHARPLES DAIRY TUBULAR

The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.

Write for Catalogue No. 194

THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

LIVE STOCK.

Watering the Show Herd.

Frequently the successful fitter of show stock is lauded to the skies by both the press and the public for his successful manipulation of the feed pail. Perhaps the credit is due the water bucket rather than the feed pail, but always it is the feed pail that gets the credit. To understand the why of it, take the case of range cattle as an illustration. The grass for many miles about the water holes is eaten into the earth. They soon acquire the habit of coming to water but once in six or seven days. When once they do come to water they drink and drink till they have to stop from sheer misery. Then they retire to some near hillside where they rest and ruminate until they can return and drink again. They may lie about the water holes in this fashion and drink and rest and drink again for two days or even longer. When they trail out for the grazing grounds again their systems are so thoroughly saturated with water that they do not have to return again for three or four or even five days. Similarly in the fenced pastures of Texas, cattle will not visit the water tank oftener than once in two days even in mid-summer. This is true even though there is a water tank placed on every section.

It is the same thing that the fitter has to contend with in his show herd. If left to themselves his charges will usually drink once a day. There are a few that in summer will drink every twelve or eighteen hours, but there are others, not a few, that if allowed to take their fill will not drink oftener than from thirty-six to forty-eight hours. With range cattle or farm stockers this may be allowed, but not so with even steers in the feed-lot. But take the case of the show steer. Roots, bran and chaffed hay are added to his ration until it attains twice the bulk of that of the steer in the feed-lot. Then the show steer is fed three or four times daily and fed only what he will clean up, so his appetite is kept always at a keen edge. There is no room in him to hold a two days' supply of water, for no sooner is his punch emptied of one meal than it is filled with another. Take such a beast as this and allow him to tank up with about twenty gallons of water every day and the result is disastrous.

The trouble has two ways of manifesting itself. One result—and the least harmful—is scouring. The animal is thrown off feed for a few days and when a few days later he is ready to tank up with water again he is not so full of feed and so there is more room for water and less trouble follows. But scouring is followed with costiveness, and so the gain of a month is lost in a week.

The second result, more serious but less frequent, is founder; and "been feeding to heavy," or "too much corn" is the advice of your sympathizing neighbors. At the show the fitter says: "Oh, he was a poor feeder; wouldn't gain over thirty or fourty pounds a month," or "He took something like the rheumatism and I had to turn him out."

It is all sheer nonsense to say that a beast accustomed to all he will eat three or four times daily for months can be foundered by eating too much. More than nine times out of every ten when the show beast is scouring, off its feed, costive or has gone lame, the trouble is caused by over-drinking, not overfeeding. And with such a beast your success depends less on how and what you feed than on how you water him.

To water wisely, the first thing to do is to teach your charges to drink from a pail only. The lesson is a hard one. Some cattle will obstinately refuse to drink from the pail for three or four days where they have been accustomed to drink from the tank only. Surely no animals are greater slaves to habit than cattle. But there are sometimes no tanks on the fair grounds and it is a poor time to teach new habits when the show day is on. Besides they should drink from the pail at home. Then you are in a position to restrict the morning drink enough that they will drink again at noon. Do this with judgment; see to it daily; let nothing suffer for water but let nothing drink too much at once. Remember that on your skill with the water bucket depends your reputation as an adept at the feed pail. As to how often to water—it must be at least twice a day through early spring and autumn and three times daily through warm weather. In theory it would be best to water as often as you feed. But if you feed four times daily you will find it hard to make your cattle drink so often, especially in cool weather.

Last and least comes the question of when to water. With the horse, having but one stomach and a small one at that, it may not matter whether he be watered before or after eating. Even here, however, experiment stations have reported in favor of both plans, But while the horse has one small stomach, the ox has four large ones. The majority of fitters both advocate and practice watering before feeding, but that very astute stockman, Thomas Clark, of Illinois, has advocated that the show cow always be watered after feeding and he has given very good reasons for his theory. Personally I have tried both plans. If one plan was better than the other my observation was not acute enough to notice it. But a change from one to the other was usually marked by a slight disturbance in gains and appetite. The idea is to water wisely, water well, then you may hear of your skill with the feed. —Breeders' Gazette.

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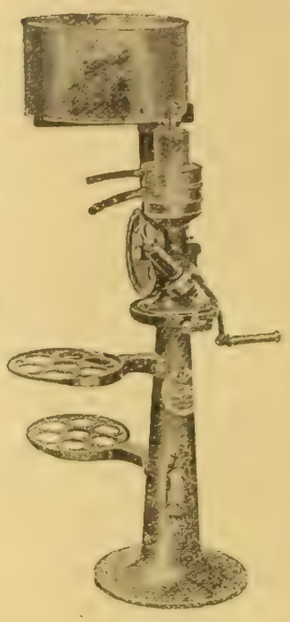
A VITAL POINT FOR THE PROSPECTIVE BUYER.



To clearly illustrate this important question:—

To separate 100 lbs. milk (10 gals.) with a 350 lb. capacity separator, you must operate it about 20 minutes.

To do the same work on a 500 lb. capacity separateor it takes but 12 minutes.

You Save 8 Minutes

in time? Yes, but that's not all. In wear? THAT'S IT. Eight minutes in wear every time you separate 10 gallons of milk.

The Capital

is small in appearance alongside of other makes of EQUAL CAPACITY because of its simple yet strong construction and its "easy to wash" bowl, separating 500 lbs. of milk per hour. Weighs less than four lbs.

That's Why.

our competitors put in a machine of but 250 to 350 capacity for a few dollars less money and lead you to believe you are getting a cheaper machine.

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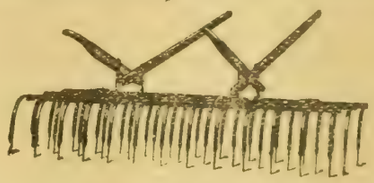

The Original "HALLOCK" Weeder.

The object of a weeder is to keep down the weeds, therefore, it resolves itself into this one fact: that a weeder should be used early and often, so as not to give the weeds a chance to grow. You will not injure your crops by working the ground directly over the plant or grain, but will do much toward increasing the growth and yield.

You can work them in dry or wet weather, they will not cut the roots of the crop, but cultivate just deep enough to retain the moisture just where it is needed. But, do not forget the old rule—Use the WEEDER early and often, and when you are all through with all kinds of other cultivators, our weeder will finish your job in No. 1 shape. Thousands in use. Write for prices and terms.

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It keeps them in good health, prevents and Cures Coughs, Colds, Diarrhoea and other complaints. Prevents and Eradicates Worms and Parasites.

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91 Youville Square, - MONTREAL.

Some Suggestions on Out-Crosses and In-Breeding.

I do not deem an out-cross a violent one, even though not the most remote relationship exists, if only the out-crossing animal is identical in type, rendered so by some generations of ancestors of similar conformation and character. Such out-crosses are most desirous, and if the breeder could always obtain them there would be no necessity for in-breeding. On the other hand, any animal of the line, however near he may be related, if the type is wrong, the cross, with him, is more or less violent in degree, dependent upon the remoteness to the type he represents in his make-up.

Type to type, with an ever watchful and zealous effort to improve health, constitution, feeding qualities and character, is the motto that I would adopt, and let relationship take care of itself in the main; but, when possible, introduce unrelated animals to compromise with the project we all entertain, regarding near relationship, but never sacrifice one single iota of the original purpose of individual stamp for an out-cross that may do incalculable harm in the way of set-backs that will take years to correct.

I have been wholly unable to see how animals of perfect health, perfect digestion, perfect form, perfect disposition, perfect reproductive powers and prepotency, can deteriorate, however much they may be in-bred, if only all these attributes are kept intact by proper care and attention, always discarding those that are not so endowed, if by accident they happen to be produced from the breeding herd.

The most successful flock of Lincoln sheep I ever bred were lambs out of ewes with a common sire. I hazarded the risk because the ram was great in all essentials and very prepotent. These lambs were subsequently bred to unrelated sires and the best results followed, in that the most desirable attributes of the old sire were manifest in the out-crossed off-springs; and the flock has continued to this day to breed back his type, leaving out the individual make-up, in a great measure, the characteristics of the intervening sires, and I have recently made up my mind to cast about for a son of the old ram, in the hope that I may more securely fasten his good points onto the flock. It is needless to say that the son must possess unmistakable evidence of perfect health and vigor of constitution.

It is a dangerous thing to select sires haphazard, and I think I would advise, if I advise at all, that the breeder with ambition to be a leader should not go outside of his own herd to get them, but I would have him deliberately set about to breed them for his own use out of the best he has at hand from animals whose capabilities and breed qualities and prepotency are a part of his intimate and certain knowledge, based upon a close scrutiny for years together.—H. M. Brown in Indiana Farmer.

Trouble With Pigs.

It is drawing near the time when we may expect the annual lot of letters enquiring as to what to do with pigs when they are losing the use of their legs. It seems too bad that so many otherwise farmers do not learn that lack of experience is in most cases the reason for pigs losing the use of their limbs. Pigs cooped up in a little 7x9 pen, with not any too much litter for a bed; and where five or six are in a pen of this size it is impossible for them to get exercise unless they take to jumping over each other. The natural result is that they do not grow as they should and after a time begin to wabble on their legs.

There is not a better paying class of stock on the farm than the hog, when it is properly taken care of; but until the farmer himself will learn to handle his pigs right all the commissions to Denmark or elsewhere is just that much money wasted.

Sheep Notes.

Under average conditions sheep are more economical meat producers than steers.

The quality of mutton is more in the feed than in the breed.

If you desire the best returns for feeding, make your lots of fat sheep as evenly as possible.

Breed the ewes so as to have the lambs just as early as your circumstances for caring for them will permit.

The man with worn or thin lands to enrich can use sheep to better advantage than he can any other animal.

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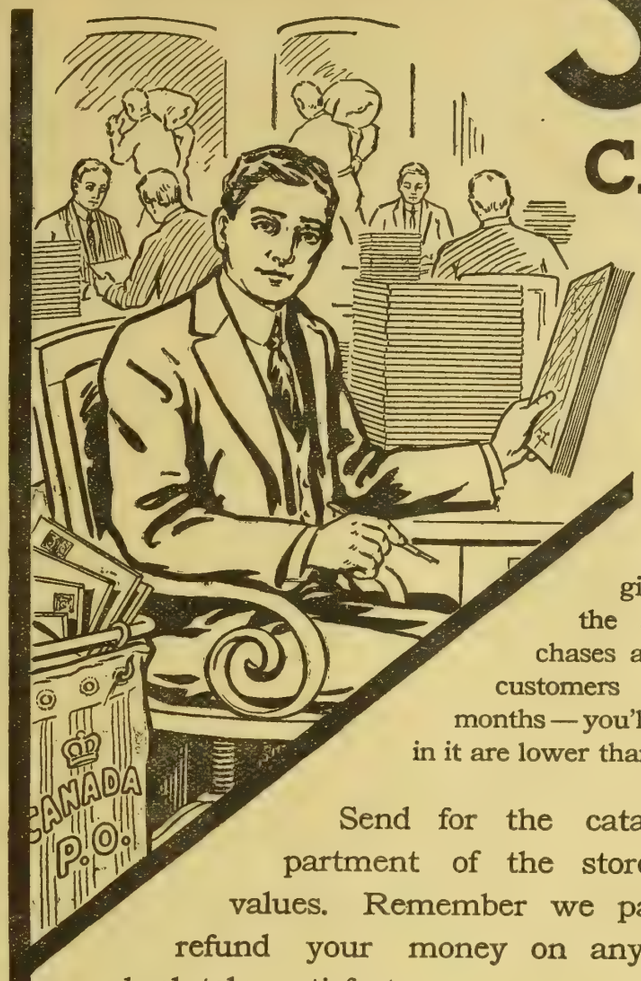

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will want a "Puritan" Washing Machine Ball bearings and roller gear mean easy washing. All cogs and machinery covered. Strong, substantial. A child can wash a tubful of clothes in 5 minutes with the "Puritan".

Yes Ma'am—The Best

"Favorite" Churn has proven itself the best churn in Canada. 8 sizes.

Write us if your dealer does not have them. 72

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Minard's Liniment Co., Limited

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

The Secret of Larger Yields.

The whole secret of larger yields of milk is that a cow is considered to make milk from her whole system, devoting all her energy to the work. She has, as it were, a storage battery storing up energy whilst dry, and strengthening her whole system. The feed fed whilst a cow is dry often has more effect on large production than that feed fed, at the time she is producing heavily. A cow's stomach can easily be overloaded. A cow that is fed too much and is bilious and sick is not likely to produce so well as if fed just enough to satisfy her.

Many cows are knocked out by over feeding. It is impossible to say how much a cow should have to produce the best as so many cows have to be fed and considered as individuals. A cow when she first freshens must be considered as an individual. Owing to the tax of motherhood her stomach will not be so strong and she must be fed very judiciously for a couple of weeks. Considering the demands of motherhood in itself no little tax upon the cow besides producing heavily, we see how absolutely essential it is to give a cow the very best care and feed at all times. It is necessary if we expect good work from the cows to fit them for the work.

TWO MONTHS REQUIRED TO RECUPERATE.

A cow should be dry two months or more yearly and whilst dry is the time to feed her for the next year's work, to strengthen her up. This is an essential point in managing dairy cows. But it is not followed. Not well enough understood what a tremendous tax it is upon a cow to produce milk yearly? If we want say 7,000 lbs. of milk from a cow consider that she is providing 2,800 quarts of milk equal in value to that many pounds of beef. How important it is to recuperate her system. Furnish her with energy for the next year's work whilst dry. Is this often done? On the contrary cows are dried up often not to feed them up and recuperate them but to save feed on them. The result is a poor cow, poor in energy, weak, when she should be strong. So long as the present system or lack of system prevails we cannot hope to get large yields.

A cow to give large yields must be bred with the inherent ability to devote her energy to milk production. The ability is of no use unless she has the energy. This can only be secured in a good measure whilst the cow is dry. It is well known cows do not give the same quantity of milk each year. It will depend upon what fettle she is in when freshening. Sometimes a cow will not get in as good condition as we would desire. It may be that the pasture has been poor and the cow has run herself down more than we made allowance for. She may have milked so heavily she has not recuperated properly. But the greatest cause of a poor condition is that no attempt has been made to put her into condition. Hence low production is sure to follow.

THIN COWS REQUIRE 2 YEARS TO GET INTO SHAPE.

It is well known by some dairymen who are considered good feeders, that it is necessary to feed a cow that has been in poor hands two years to get her system strengthened up so that she will be able to do her best work. She will likely give considerable more the first year of good feeding, but it takes two years to bring her to her maximum production. This shows that the milk does not come directly from the feed, but as the energy is built up in the cow she is stronger and is able to do greater work.

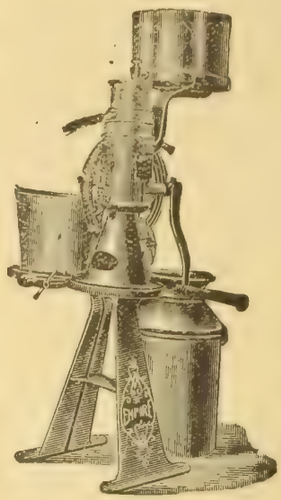
Of course it is important that a cow should be fed well when she is producing else she will draw more largely upon her bodily energy and when she has depleted her system she will have to shrink in her milk flow. However, it is always injurious to feed a cow too much or overload her stomach. We want cows that are constitutionally strong, and we must do all we can by judicious feeding, and care to keep the cow in as good fettle as possible.

But since with the very best care and feed we can give a good cow, will draw upon her system and deplete her energy, it is necessary to have her dry long enoygh to replace this energy. It is because this is not done and cows are fed so poorly whilst dry that we see such poor results. There is no use of a man asking for a ration when a cow is fresh. A man needs to know how to feed her whilst dry as well as all the year round. The best way to teach that is to show the tremendous energy that the milch cow expends in producing milk.

Effect of Food on Milk.

This perennial subject forms the basis of one of the best papers read at the B. D. F. A. Conference. Dr. Russell has focussed present knowledge on the theme in an admirable way, but at the same time there is still much to be learned. The burden of his paper was missed by most of the subsequent speakers. It was an appeal to the every-day farmer to come to the assistance of the scientific investigator, by furnishing a fuller area of facts than has yet been placed at his disposal. The broad facts disclosed in Dr. Rus-

Farmer Agents Wanted



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District representative will call and instruct. Every assistance given in making a sale. The **Empire Cream Separator** is the easiest to clean, easiest to turn, and easiest to sell of any separator on the market.

A card or letter written us today will be attended to at once. Just now, between planting and harvest, you will have a breathing spell—why not make a few dollars? No loss of time from your farm work, no investment, no travel, and no fault finding after machine has been placed. No better proposition has ever been offered you. Write today.

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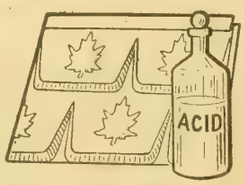
SUSSEX, New Brunswick.



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The sheet metal the British Government buys for public works must be able to pass an Acid Test more severe than twenty years of Canadian weather.

PRESTON Safe-Lock Shingles are the only shingles made and galvanized according to British Government Specifications. They easily pass this Acid Test. They are practically everlasting—the most durable roofing in the world.

PRESTON Shingles are the only shingles SAFE-LOCKED on all FOUR sides. They are proof against rain, snow, fire, lightning, and wind. Canada has not yet been visited with a gale strong enough to unroof a single building covered with PRESTON Safe-Lock Shingles.

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sell's paper do not seem to us to modify the accepted views on the subject. What he calls the law of diminishing returns (unhappily, a law with which farmers are quite familiar!) explains a good deal. The cow can only take a certain amount of food. Consequently, if less be given less will be available for milk secretion, because the upkeep of the body must first be conserved. But just here a difficulty arises. All cows are not alike. The individuality of the cow comes into play, and some cows will continue to give milk even if they be starving and losing weight. Farmers could greatly assist the investigator by taking pains to observe and collect good rations, with their effects upon cows. In America much more has been done in this way than in this country, but even there the data is insufficient. The only thing that seems to be certainly demonstrated is that there is a point beyond which a cow cannot be fed so as to modify the quantity and the quality of her milk. If this were not so, there would be no milk standard difficulty. If the standard could be sustained by feeding there would be no defence for selling milk below 3 per cent.

As an historical review of the subject, Dr. Russell's paper is invaluable. His critical analysis of the successive experiments leaves little to be desired. This is true specially of the well-known Copenhagen experiments, which, confirmed in Germany, America, and England, formed the basis of the belief that the composition of the milk was independent of the ration, and that, no matter what food was given, it was impossible either to increase or to lower the percentage of fat. One defect in these experiments, however, was that they did not offer any ration which at all approached the heavy rations of watery material fed to cows in the ordinary course of farm practice. A farmer must feed his cows with what he has. He may know all about the albuminoid ratio, but his knowledge is of small use to him if his farm produces a vast amount of food which sets the albuminoid ratio at defiance. He must consume the food his farm grows, and he often cannot afford to purchase sufficient concentrated food so as to make his feeding scientifically accurate. It is undoubted that the quantity of milk can be affected by the character of the food. but it is not yet proved that the quality of the milk can be so affected. Of course, it stands to reason and common-sense that if the volume of milk yielded by a cow be increased by feeding, the percentage of fat and solids in her milk will be diminished; but it is not proved, and we suspect it cannot be proved, that the actual total of solids and fat can be affected one way or other.

The experiments conducted by Dr. Van Rijn, gave a result which he did not anticipate, but they proved that the most influential factor affecting the milk supply was the individuality of the cow. He wanted to discover whether the milk supply would be affected by the change of habitat of the feeding cow from the byre to the meadow. He turned two of his three groups of cows, after a lengthened test in the stalls, out to the meadows, and then found that it was not the milk of the cows whose diet had been changed, but the milk of the cows whose diet had not been changed, that underwent the change. The nervous condition of the cows which remained in the barn injuriously affected their yield of milk, while the change of food in the case of the others had no effect. Surely this is proof that the individuality of the cow has more to do with the quality of the milk than her food. Everybody knows that a milking animal is a peculiarly sensitive piece of machinery—that it is the easiest thing possible both to lower the quantity and to disturb the balance in the quality of the milk by disturbing the cows, or putting them into unfamiliar situations or surroundings. Old-fashioned dairy folks, whose scientific knowledge was very limited, were familiar with that fact, and acted accordingly.

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How Tuberculosis is Introduced Among Cows.

A Wisconsin dairy herd of forty-six head, all appearing healthy were sold to divide the interests of landlord and tenant, says Dr. H. L. Russell, Dean Wisconsin College of Agriculture the former retaining eighteen head of what he thought the most valuable animals and then buying three. The herd was dispersed to twelve persons, eleven of whom thus introduced tuberculosis into their herds, for thirty-two of these cows were found to be infested the tuberculin tests being given by State Veterinarian, E. D. Roberts. None of these animals showed any outward appearance of the disease and no one suspected its presence at the time of the sale. The post-mortem examinations showed it had made only slight headway. However, it had begun to spread in the five months following the sale. Its accidental discovery was most timely, to prevent the spread of infection from the twelve centres.

And this is the story of how it happens right along. We didn't have tuberculosis a generation ago because we were not buying from the outside. We have been seeding the disease by the interchange of stock. In the early stages it was spread by the pure-bred stuff. The speaker knew one such herd which had spread tuberculosis to sixteen other herds in four states. One man lost $3,000. The public auction has been a still more potent factor than private sales in thus spreading death and destruction, until now our grade herds are in worse condition than pure-bred cattle.

Out of 363 diseased herds found in Wisconsin tests, 263 herds, or more than 72 per cent. had acquired the disease by purchase. What more positive proof could one want of the spread of tuberculosis through the interchange of animals from herd to herd?

When a man buys a tuberculous animal he could better afford to take it out and knock it on the head than to take it into his herd and let it spread the disease.

The practical lesson growing out of this knowledge is, never buy cattle to take into a herd unless they are subjected to the tuberculin test.

Clover makes the cows give milk. See that you have a supply on hand for next winter.

Dairy Notes.

A few roots or a little extra oil meal will aid cows in shedding old hair.

Feed the lice coal tar dips rather than allow them to feed upon calves.

A little bone meal added to the salt will keep cattle from gnawing the mangers and fences.

Weigh and test the milk of your cows and see which are filling your pocketbook.

Among the chief grafters of the times are round, fat cows, that eat, but pay not.

Each cow should have her regular milker.

The grass looks green long before the cow can get a mouthful.

Winter fat prices are what make you smile.

The poor milker eats nearly as much as a good one.

Sit on the stool, don't pound the cow with it.

The wild cow is almost invariably a small milker.

The calf pail should be kept as cleanly as your own cup.

Frequent changing of breeds is inviting the weak points in each.

There is as much need of a balanced man to feed the ration as there is of a balanced ration.

The more sheep you can keep and keep right the less per sheep will the cost of keeping be.

Rightly managed the ewe from a good sheep will pay all expenses of keep and leave a profit besides.

THE HORSE.

Clipping Horses.

It is very commonly found advantageous to clip horses partially only, instead of having the whole of their coat removed. This plan is very usually adopted with heavy cart-horses used for town or road work, as well as with many horses of the light draft horse class, such as vanners, contractors' horses, 'bussers, etc., which perform their work at a slow trotting pace, while tradesmen's cobs and ponies are also frequently clipped in this fashion. In the case of horses and ponies which are kept standing about in the open a great deal in the course of their work, and which in consequence are much exposed to cold and yet, partial clipping certainly proves most useful, and may, therefore, be recommended. The advantage which such partial clipping possesses in these circumstances over the usual method of clipping the whole of the body consists in the fact that the horse continues to enjoy a certain measure of the natural protection against the cold and rain which the winter coat affords, while at the same time it also to some extent experiences the benefit and relief which clipping confers. It will, of course, be readily recognized that a partial removal of the coat does not afford the same full measure of relief to the horse as is secured by clipping it all over. Considerable diversity of practice prevails in regard to the manner in which partial clipping is carried out. In some cases a larger area of the horse's body is clipped than is done in others. No hard and fast rule can be laid down on this point, as it to some extent depends upon circumstances how much or how little of the coat should be removed. Very usually, when partial clipping is adopted, the horse is clipped "trace-high," as it is termed—that is to say, the lower part of the body is clipped from below an imaginary line drawn along where the traces will come when the animal is harnessed to a vehicle, while the coat above that line is left untouched, the unclipped parts thus including the upper portion of the shoulders, ribs, flanks, and quarters, the back, the loins, the croup, and the neck. The legs are, as a rule, left unclipped in partially clipping a horse, and rightly so. The ideas of horse-owners do not, however, always fully coincide on the question as to what exactly constitutes "trace-high" clipping, and in having their horses done in this fashion some prefer that the dividing line between the unclipped and clipped portions should be rather high up, while others like it to be low down. This "trace-high" style of partial clipping is a most suitable one to adopt in the case of heavy and light draft horses which are worked wither at a walk or at a slow trotting pace and perform an average amount of work, inasmuch as the clipping of the coat on the belly and lower parts of the body will afford them sufficient easement and prevent them from being inconvenienced by the coat's weight, while the upper portion of their body will be fully protected against the inclemencies of the weather. But in partially clipping horses of the heavy or light draft types whose work is of a particularly exacting nature, or such as have to go at a fairly fast trotting pace, hardly sufficient relief will be afforded them if clipped merely trace-high, and in these circumstances it will probably be desirable to clip a large area of the body. One must take into consideration the nature of a horse's work, and also the pace at which it is worked, in deciding how much of its coat shall be removed. The more exacting the work is, especially in regard to pace, the larger a portion of the coat should be clipped, so as to give the animal an adequate degree of relief from its weight. Only very little real benefit accrues from partial clipping if an unduly large proportion of the coat is left unclipped.

The parts of the body which stand most in need of protection against cold and wet in horses are the back and the loins. The latter in particular are a sensitive region, and more susceptible to being chilled than any other portion of the horse's anatomy Hence, when the practice of partially clipping a horse's coat is resorted to, one should, at any rate, always leave the back and loins unclipped, and considering the exposed position of these parts, and the peculiar susceptibility of the lumbar region to chill, it will readily be apparent that there is considerable advantage in allowing them to retain their full natural protection against cold and rain in the cases of horses and ponies which are kept at work for long hours and have to stand about a great deal in all sorts of weather in the course of their work. With horses that are worked mainly at a medium trotting pace, an excellent mode of clipping them partially is to leave only the back and loins unclipped, while removing the coat from the rest of the body, including neck and head, but excepting the legs. To clip the coat off the upper portion of a horse's body and leave the lower part unclipped, as is sometimes done, is foolish, such a style of partial clipping being opposed to all common sense. Rather than do this, it is better not to clip the horse at all, or else to remove the whole of its coat. The real essence of the system of partial clipping is to leave the most exposed and sensitive parts of the body—i. e., the back and lumbar region—unclipped, so that they may enjoy full natural protection, however much or little of the coat on the other parts of the horse's body is removed.

The Well-Matched Farm Team.

An impressive fact is the scarcity of well matched farm teams. There is a very strong demand for such teams and one who possesses one usually has several standing offers for them either from neighbors or city buyers. A few men appreciate the value of a well matched team, but as a rule the average farmer pays slight attention to the proper matching of his horses.

Many a team is considered well matched which, in reality, is not so. The work of putting together two horses that are enough alike in all characteristics to work in harmony is an ist not to be despised. There must be a similarity in style, action, general conformation, appearance and color to produce the well matched pair. The best results are usually obtained when horses are paired soon after being broken. There will then be more of a tendency to grow alike in action and less danger of developing irritable dispositions. Habits in horses as in men become more fixed with age.

Considering that all other points are medium in perfection there is no quality which adds or detracts so much from the value and appearance of a team as action. If they move with snap and vigor, are stylish, steady, straight and balanced there is no feature so attractive to the buyer or so pleasing to the driver. It matters little how well the team meets the other requirements if the action is unlike, one horse up on the bit and the other with the single tree rubbing the tire. The annoyance is so constant that it demands an extraordinary control of the driver's temper.

Strength and conformation are points next in value. Some teams will start out well matched but after working a short time one will lag far behind. Strength is indicated by a short, deep middle, close coupled and well muscled over the loin. Loose joints and flabby muscles never indicate staying power. Disposition often influences a horse's ability to do work. A nervy, high strung horse will often keep up on the bit after he has become tired.

Size is important, though it can be sacrificed when other points correspond. A difference of a hundred pounds in weight does not materially detract from the value and appearance of a team. A difference in regard to color is the least objectionable feature in a team.

A well matched team is a pleasure to handle and creates pride in the farm and brings respect from all who see them. It will sell for a good price and advertises the farm in a desirable manner. The effort required to obtain a well matched team will be well paid for.MA. J. Bredvold, in Farm, Stock and Home.

Colt Following Mare.

Under almost all circumstances it is better not to allow the colts to follow the mares. Colts suffer an undoubted injury from following doggedly along mile after mile with their dams in the field or on the road. Everyone who has allowed colts to follow is familiar with the tired lifeless habit they develop. A stiff spiritless gait, an unshapely, thin body and stunted growth are common faults of such colts. They have literally been put to work practically from birth and their constitutions are not equal to the strain. A colt cannot work and grow as he should all at the same time. The exercise he would naturally take in a day is only a small fraction of the amount he takes in following the mare. Then, too, the work of following along at a walk in the fields does not bring all his muscles into play as does a jumping, tearing, romp with his body twisted and squirmed into a hundred contortions. Moreover, a colt is a great hindrance in the field; he gets lost or follows some other team away on the road. When the team is doing light work that does not tire the colt he is continually into mischief and is liable to get hurt. Again at the most inconvenient

(Continued on page 573.)

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POULTRY.

Scrofulous Poultry.

Scrofula is really a form of tuberculosis, and, indeed, it may be said that the only difference between the two is that the former shows itself in eruptions and sore places externally, whilst tuberculosis lurks in the lungs and other internal organs, and its presence is not generally recognized until it has taken a fatal hold of its victim. Scrofula usually appears as a running sore, which may be on the breastbone or on the joints of the wings or on the leg, but wherever it appears it is always difficult to cure; and it is this difficulty in getting it to heal up that shows a wound to be of scrofulous tendency. In the first place it is quite certain that a bird which is suffering from anything of this kind is not fit to be used as a stock bird. It is curious to notice that birds which have been bred from when suffering from scrofula have been known to produce chickens which have died off of tuberculosis in the lungs, and this shows the intimate connection that I have already referred to between scrofula and tuberculosis. Some breeds of poultry are much more subject to the complaint than others; the explanation of this is that of late years, with the increase of poultry exhibitions and of competitions to win prizes thereat, there has been a disposition to indulge in what is called in-breeding, the object of which has been to fix certain exhibition points. This is a practice which is, of course, altogether destructive of health, and the poultry farmer who is anxious to promote what is called utility qualities in his stock should be very careful to avoid purchasing any which come from a strain in which anything of the kind has taken place Many breeds of poultry have been absolutely ruined for utility purposes by this breeding for exhibitions, and there is no better example to be found than that of the old black Spanish, which at one time had the reputation of being the most productive of all breeds, but which to-day has altogether gone out of fashion, its place having been taken by modern varieties.

Now as to dealing with a case of scrofula when it occurs. The first essential is to keep it perfectly clean. To this end it should be bathed twice a day at least with warm water containing a small quantity of permanganate of potassium, which is antiseptic in its nature and will thoroughly cleanse the wound or sore. This having been done, apply a small quantity of carbolised vaseline, and apply a pad or bandage so that the bird cannot interfere with the place, and do not allow it to perch, but make it rest on straw. Some internal medicine should be given at the same time, nothing being better than an occasional dose of Epsom salts, which can be dissolved in a little warm water and poured down the throat, and at the same time the bird should have a little Parrish's chemical food in the drinking water, which acts as a nutritive to the bird and tends to discourage any scrofulous tendency.—By "Mid-England" in Feathered Life.

Charcoal for Fattening Poultry.

In a recent issue of the Journal of the Irish Board of Agriculture, it is stated that the Board have been furnished by Mr. H. de Courcy with an account of some experiments carried out by him for the purpose of deciding the exact value of charcoal as a means of keeping birds that are closely confined in good health during the period of fattening. Eighteen large, healthy Aylesbury ducklings were selected from a large flock, and divided into three pens, each pen containing six ducklings of as uniform weight as possible. Each batch of six ducklings weighed fifteen pounds, or an average of two and a half pounds per head. Throughout the experiments the ducklings were fed upon foods which previous experiments had shown to be profitable and ecomomical—namely, boiled potatoes, barley meals, ground oats, skim milk, and tallow greaves. The method of preparing the food was to boil, strain, and pound up the potatoes, which before boiling would constitute about ane-third by weights of the mash. Barley meal and ground oats were then mixed in equal parts and mixed with the potatoes. Skim milk was added to form a rather wet mash. This was fed to the ducklings from the end of the fifth to the beginning of the ninth week. During the last two weeks of fattening, animal food in the form of rough fat or tallow greaves was added to the mash, the allowance being about two ounces per day to each duck. Grit and water for drinking were liberally supplied. Apart from the charcoal the food received by all the ducklings was the same.

Tables were given as to the results of the trials, which show that charcoal in one form or another is essential in the profitable fattening of ducks. It appeared to keep the ducklings healthy, and enabled fattening to be continued with profit for a much longer period than when charcoal was not allowed.

The experiments with geese were conducted on similar lines, and gave almost identical results. The breed was the Embden-Toulouse. The foods fed to the geese were the same as those fed to the ducks, except that they got steeped oats instead of mash for the evening meal, mash being fed in the morning. The charcoal fed to both ducks and geese was burnt wood, broken fine.—Irish Homestead.

Killing Poultry.

Of the many methods of killing poultry that of bleeding the bird has come to be considered the most satisfactory. It has the advantage of removing all the blood from the body without leaving any unsightly wound. If the operation is properly performed all the blood is drained from the body, leaving the flesh of a white color.

The birds should be fasted for 24 hours before killing. Several hours after the last feed allow the birds all the water they can drink. They should then have a complete fast until they are killed.

To kill the birds by bleeding secure a stout cord to the ceiling of the killing room and attach to the end, which should extend down as low as the operator's shoulder, a piece of iron, preferably a large burr. When ready for killing, the birds may be suspended on this cord by simply giving the cord one wrap around the legs, pass it over itself and allow the burr to drop. Hung in this way it is impossible for the bird to become detached, and it can be more readily bled while suspended.

Te bleed, place the left arm over the bird, grasp the bird by the neck near the head, with the thumb on the throat. By a gentle pressure of the thumb force the mouth open exposing the arteries on each side of the mouth. With the right hand insert the knife so as to sever first one of the arteries, then the other. Next pierce the brain by passing the knife through the roof of the mouth towards the top of the head and give it half a turn. Both arteries must be severed in order to insure complete bleeding, and complete bleeding is the only means to prevent the flesh from turning red. The successful piercing of the brain is characterized by a peculiar flutter throughout the body. The plucking is much more easily done if the killing has been properly performed.

To catch the blood and save the annoyance of its being scattered about, attach a small vessel such as a tomato can or a small lard pail to the mouth. To do this stretch a wire tightly across the top of the can and to the middle of it attach a two-inch wire hook which is to be hooked into the mouth of the bird, allowing the pail to be thus suspended below the head.

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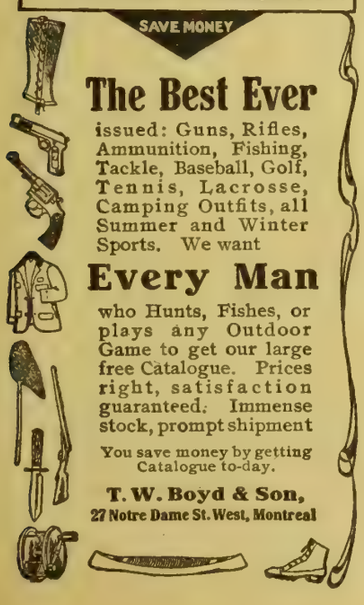

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Jacassa's Journal.

By Mary W. Janvrin.

(Continued from last issue.)

What need to enlarge here? Reader—ah, there comes in "the smell of the shop" again—if you be a woman who has survived the age when every school-girl fancy looms up a mirage—la grande passion—you must have recorded on your brain-tablet similar experiences of your own; and, if you have not, please take my word—Jacassa Selina Bowen, spinster's—for it, that you must be "the exception to the rule," the "one out of the hundred" who have escaped them. I smile now when I think how, as time passed, I loved the author of that little pink, scented note, for I did love him with all the strength of a first sentiment. I suppose it was because of the intensity of my nature. I never do anything by halves; I either love or dislike strongly, unless by chance I sometimes get into that negative state, indifference. But I will record what a devotion I cherished for Montague Livingstone Wentworth, and how, after our correspondence progressed till three score or more of notes had passed between us, and the congenial Elsie Amantha had accompanied me home, and the poet-brother came down to pass a leisure week with his divinity at Aunt Selina's, one day, in the little arbor of Aunt Selina's "back garden," he got down on his knees, and, with his hand on the right side of his white Warseilles vest, vowed eternal fealty to "his peerless, genius-dowried Jacassa.'-

Well, Elsie went back to school, to send me little sisterly notes weekly; I remained with dear old Aunt Selina, who was getting feeble, and "the twin of my soul," who had, meantime, weaned himself from his Alma Mater, though professing his intention some time to write a book of poems "that would startle the world," returned to his native town, content meanwhile to step into his father's shoes and country practice as a more sure foothold in this matter-of-fact world than an uncertain ride on Pegasus's slippery back, varying the employment of mixing pills by inditing sonnets "To Jacassa's Eyebrow!" and letters teeming with protestations of never-dying affection and anticipations of that time "in the bliss-fraught future" which "should bring him happiness and Jacassa."

And this was why—because of the jockey-club scented notes, and the flattery, and the protestations, and sort of shy, silent bliss of reveries and dreams—because of the lock of oiled hair I kept in my writing-desk, and the ring, deviced by two hearts transfixed by one arrow, I wore on the "engagement finger" of my left hand—because of that very natural feeling, common to all hearts, which makes us all want somebody too love and to love us, till sometimes the glamor so blinds our eyes that we mistake the dross for the fine gold—because of all this, for one twelvemonth of my life I walked in a blissful dream along a path of roses.

But the awakening came. The roses turned to commonest flowers—primroses or "old maid's pinks," at that! The day came when—but the tears attest my jesting mood as I write now, and I am saddened, for with that sorrow began the first real experiences of my life—the day came when dear old Aunt Selina died. I loved her; I had brightened some years of her quiet, lonely life; and of late I had strengthened the feeble, groping steps which, day by day—though I did not know it then—were drawing nearer heaven. I felt a strange, sad loneliness when they pressed the sod over her coffin in the little village graveyard. Were my feelings prophetic? Eighteen, and kinless! But when a letter came from Montague, expressive of love and sympathy, I could but strive to banish my sadness, and though tenderly cherishing my kind old aunt's memory, imagine that the world held some brightness after all.

After that, there were strange revelations. Everybody at Eastlake thought Aunt Selina in "comfortable" circumstances; and though I had known that the keen-eyed, ferret-nosed lawyer, Esquire Lynx, had "let" my aunt some moneys, which she had expended in repairs on the place, giving notes for the same, yet from my soul I could not believe but those were fraudulent ones he brought in against the estate at the executors' settlement, covering, as they did, nearly the whole property. Yet there was Aunt Selina's signature, in her cramped, old-fashioned hand. Surmises, if indulged by others, were withheld from me; so, when affairs were settled, it was found that Esquire Lynx's claims covered the whole home-place, and the bequest of 'Selina Bowen, spinster," of her whole property to "her beloved niece, Jacassa Selina Bowen," resolved into my receiving but the paltry sum of a few hundred dollars, as residue of the sale of said "property," "when outstanding debts were paid."

To say that I was surprised at this state of affairs and my sense of utter dependence would hardly express my feelings; I was confused, blinded, not knowing whither to turn. From having never known a want, from being the petted child of Aunt Selina's adoption, who, certainly, if in the straitened circumstances the settlement of her estate showed, was never parsimonious towards me in the matter of money—from this to being thrown, as it were, on myself for a time completely unnerved me. It was weeks before I could fully comprehend my position. Meantime, as the executors' sale had taken place, and the homestead had been bid off at public auction, I had gone to board in the family of the village minister, a worthy man, whose wife had been a firm friend of Aunt Selina's. The venerable man only sighed and shook his head, when the place was sold to the highest bidder; but good Mrs. Dean said, in her cheery, comforting way- "Never mind, my dear, don't cry. It won't be long before you'll have a house and home of your own, and what is better, somebody to love you, if all we hear of that fine young gentleman who used to come to see you is true. So keep up a good heart, Jacassa! Trials are sent us by One who 'doeth all things well.' " I did not betray my feelings in the kind-hearted woman's presence, but when alone I could not restrain the heart-sick tears, for I had received no letter from Montague for a long time. Had he gone, too, with the rest—Aunt Selina, home and fortune? But, afterwards, these salt tears left me calmer. There came a mood of searching thought; something of the old spirit that made me, in childhood, seek out on the map for the spot where my father's dead body went down into the deep, sent my mental vision searching the great unknown ocean of the future to lay my finger on the spot where corpse of a head love should be buried. Was my gaze prophetic then? I think so; for, when days and weeks went by, bringing me no word of affection, no visit from one who, in the past, had asked permission to guide and share my future—when the "congenial" Elsie (who, in the days of my reputed heiress-ship, has scarce allowed a week to pass without some dainty note, commencing "pet" or "darling," found its way to Eastlake) also placed the antipodes of silence between us—then I felt a fine scorn rise up in my heart against these summer friends of fortune, who "stood afar off" when the rough hand of adversity swept over my head. So, one day, with the stregth that surprised myself, I enveloped the pink, scented love-notes, the ambrosial lock of hair, the deviced ring, and returned them all to Montague Livingstone Wentworth. I hope I gave him no more pain in the receiving than it did me in the sending. After that, I settled down for a season into a quiet sort of life. I suppose my heart wasn't dead, only benumbed, for I felt its presence yet in the gratitude I had towards kind Mr. and Mrs. Dean, who, when I told them what I had done, said: "Never think of him again, dear he is not worthy of you. You are our child now." But I think such an experience as I underwent in that time—the suddenly waking from the love-life to find one's self walking henceforth alone, bearing the memory of "not a broken heart, but a broken dream"—tends to make one distrustful, reserved, old before their time, I know it was so with me. I felt little interest in anything or any one outside the home of my kind friends; I shunned society, and, when Frank Dean began to solicit my company to the village lectures, and to manifest a growing sentiment warmer than friendship, I knew that the refusal I felt compelled to give him came from a heart which would not soon again listen to man's love. And then my pride and natural independence of character took alarm; I must not stay in that home to pain these good people by refusing their son's affection; I must go away at once—but whither? I began to cast about for some means of support, for I wished to leave intact the few hundreds, my all, which good Mr. Dean had placed in trust for me. Could I teach? I thought strongly of this plan at first; then another idea occurred. I should have written that, in the year that intervened between my leaving school and Aunt Selina-s death, I had followed my penchant for literary pursuits by the writing and sending some tales and poems to popular periodicals, for which the honor of "seeing my name in print" had been considered ample compensation; and now, bethinking of the many who follow the pen for a livelihood, I enclosed to a publisher my first aeticle for which I asked an equivalent in money. It was returned to me. "It possessed considerable merit, but, owing to the press of matter, obliged to decline. Very sorry not to be able to use," etc. etc. So ran the accompanying note from the publisher. I was disappointed, but not crushed. I do not think I am egotistical by nature but I knew the article was not devoid of merit, and I re-enveloped it to another publisher of whom I had herad favorably as an encourager of young authors. I waited days, poised between hope and fear. If Mr. G—— decided against me, I should grow despairing. But he did not; he remitted me a liberal price for my manuscript; he also sent a kind, encouraging letter— "he would be pleased to hear from me often in the future." I read that letter with tears in my eyes. I felt that my path was marked out for me; literature should be my profession and the means of my livelihood. Another piece of good fortune came. The editor of a ladies' magazine published in a metropolitan city for which I had often contributed during that year of leisure, addressed me, stating that he had need of an assistant lady editor. "Pleased with my sprightly, piquant style, could I be engaged to edit a certain department and contribute a certain amount at a stipulated price?" This, in no wise conflicting with my desire to contribute to Mr. GH's publication, as it left my evenings at my disposal, I hailed as a perfect God-send. I dispatched an affirmative answer; I would be in the city by a given date. Now, indeed, I was comparatively independentf I bade my kind friends goodbye I returned the honest shake of Frank Dean's hand, and promised to remember him with sisterly affection; I went to the scene of my labors.

That was six years ago. I have found friends—some few valued ones, foremost among whom are the kind editor and his gentle lady wife; but I do not go much into society. I write constantly; not so much from the love of the calling, or its reward—though there is rare joy in meeting face to face your own brain-children coming out from their birth-realm, Fairy-land; rare fasination in weaving now a sunny, now a sombre tissue, warp and woof at Imagination's loom!—not so much for these, as to banish, in the busy present, memories of the clouded past. And there is satisfaction in being constantly employed. No idle hours of lady-like ennui, no wearisome moments hanging on my hands! I thank God that He gave me this intense brain, this working nature!

Sometimes there comes visions of another life—a blessed home-life—where some strong arm holds me, and stems back the heavy tide of circumstances that press hard against me; where some strong, true heart shelters me and will not let the storm beat on my naked head. I hear a deep-toned voice say, tenderly, "My own, my wife!" I feel the clasping arms and dewy lips of little children climbing on my knees; I see a home made beautiful by all the garnitures which refinement can gather around me; but that mood is resolutely crushed back, and I am again alone, writing, writing, in my little boarding-house room, with the saddened heart and weary brain—alone, alone!

And yet, why sigh as I write these words? I should be content; my lot is far happier than many—the wretched, the sin-stricken. I do not envy the finest pallid lady to whom satins and velvets, and liveried equipages cannot bring freshness and happiness for the world-weary heart throbbing listlessly under her silken bodice. I am young and healthy, and I am happy. The long autumns and winters in the close city are more compensated by these country sojournings, upon which I enter in the spring-time. I was at Eastlake, last year; the Deans were glad to have me there. Frank met me with kindly heart and hand, and introduced me, with a conscious pride, to his wife and the toddling Frank at her knee. But I do not think it is good to stop always in one place, so this season brought me to quiet, country, yet sea-side, Ryefield. I

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am quite at home here, with good Mrs. Hull and the kind-hearted farmer. I am glad there is little so-called "society" here. There are two or three hotels down at the shore, but I have no friends there; and I am glad, for they might think it necessary to draw out the literary lady from her self-imposed chrysalis state, and I would not like to be lionized, even in a small way.

By the way, I have omitted to write that I read, a year or two since, the marriage of Montague Livingstone Wentworth. I liked to have forgotten it. His bride's cognomen was Nancy Maria Hopvins. I remember her—she was at the Seminary—the daughter of a wealthy retired tallow-chandler. The saucy younger scholars used to speak of her as "gawky." She had red hair and a nez retrousse, and had a habit of putting her finger in her mouth when she missed her recitation. I wonder if Montague Livingstone Wentworth dowried her with the lock of Macassar-oiled hair and the deviced ring?—I am doubtful concerning the poetical love-notes, for I remember that, at "par's request," "Nancy Mariar" was excused from "composition" at the Seminary—I suppose he did—as he did also with himself—for Nancy Maria's father is dead, and she inherits fifty thousand dollars won in the tallow business.

July 25th, 10 o'clock, p. m.

"'Lisha has come!"

Mrs. Hull came into my chamber this morning, her face aglow with pleasure. If I had been writing a story, and desired to describe her broad, beaming, motherly face as the personification of pleased surprise, I could have filled a paragraph with such description. But I was not thus engaged; instead, I was roused by her voice from the doze into which I had fallen in the cool cane rocker I had drawn up at the window—where the hot sunbeams were tempered among the flickering shadows of the great elm branches—to sit and think, or enjoy a dip into the pages of Mrs. Browning, so I only replied—

"Has? And how pleased you look, my dear Mrs. Hull!"

"And I am pleased—jest as pleased as I can be!" she replied, sitting down a moment near the window, and wiping her perspiring forehead. "And to think that he should 'a up and come home without sendin' a letter, so't I could 'a got fixed up for him! It's jest his way, though. 'Don't want any fixin's on my account, aunty,' he always says. And the beater was, I never heard the stage stop, nor nothin'. You see, Miss Jacassy, I was in the back buttery, whippin' up eggs for my custards, and what should I hear but a man's step on the sittin'-room floor and along through the kitchen, till I looked up and see 'Lisha standin' in the buttery door, and he a-laughin', and sayin' 'Good-mornin' Aunt Sarah!' and a-takin' the egg-dish right out of my hand to kiss me! I thought I should 'a fainted! I sot right down and cried, it come so sudden-like. But tears didn't last long." And her beaming countenance vertified her assertion. "I jest made him go right up to his room—I allers call the west chamber 'Lisha's room'—to get the dust off; and I come in to see if, bimeby, you wouldn't come down stairs to talk with him till father comes, while I get dinner on the table. 'Lisha'll enjoy your company, and your books and po'try; and I'm glad he's come, for 'twon't be so lonely for you now. You'll come down, jest to obleege me, won't you, Miss Jacassy?"

A sudden whim seized me. "Certainly," I answered; "but, 'just to oblige me,'" I added, detaining her, "don't tell Mr. Meredith anything about my being a writer. I have enough of that in the city; here, let me escape it. Now, promise me you won't speak of it, you nor you husband either, dear Mrs. Hull."

She laughed at my earnestness. "La, child, as if you need to go to bein' ashamed of any of them beautiful stories you make up! But sart'inly, I'll do any way to please you. You'll come right down? But,

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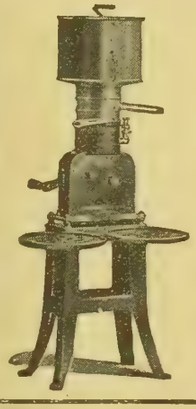

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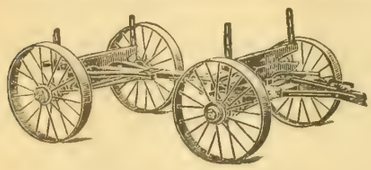

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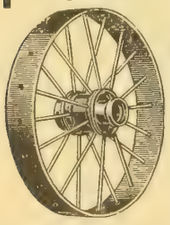

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Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Read every add in this issue. They will interest you.

dear sakes, them custards won't get made, if I stand a-loiterin' !"

In passing out, Mrs. Hull left my chamber door slightly ajar; and presently, while from the parlor below came the sound of unclosing shutters and raised windows, I heard the opening of the "west chamber" door across the staircase entry from mine, the sound of slippered feet through the entry and down the stairs, then a manly, pleasant-toned voice saying, "Aunt Sarah, why will you insist upon making a stranger of me and putting me into that close parlor?" Then, from the sitting-room, the same voice said: "Aha! what have we here? Wild flowers, fancy work, and a straw hat! You surely have a lady visitor in the house, Aunt Sarah."

(Continued.)

The Cheaper Cut of Meat.

The wide-spread agitation in regard to prices of food, and especially of meat, which has existed during the last few months, should lead to reforms in many directions. There are so many sides to the matter of food economy that it is small wonder if some important points are lost sight of in the rush of everyday living. For instance, the market price is not the final price of the food. The amount of waste that is paid for before meat is delivered to the cook increases its cost and there is an appalling waste in the trimmings and bones of the more expensive cuts of meat. This is not alone a question of loss of weight, but of nutriment, too. There is a choice in so simple a matter as buying stew meats, although one does not expect waste in cheaper cuts. A bit of fat does not harm, but pieces of meat containing much white skin are largely waste and this means something, even at 8 cents a lb.

The question of how much is thrown away in the kitchen also regulates the final cost. If food is attractively cooked it will be eaten without waste. The size of the portions or the frequency with which certain foods are served are also factors in the final cost. As a rule, people eat more than they need. An expensive nutritive food can be furnished in proper amount for a moderate sum, provided, the palate is satisfied with a good soup for instance, which is nicely flavored and made from the bones and scraps. The soup has no nutritive value but satisfies the appetite in a degree and prevents over-eating.

Aside from these questions is the one of actual first cost of various cuts of meat. Pound for pound, the cheaper cuts contain more nutriment than the dearer ones. By skilful cooking they can be made as acceptable to the palate. Generally speaking, we like the taste of meat that is browned by roasting or frying better than boiled or stewed meat. It is possible to prepare the cheaper cuts with this browned taste.

A roast quite good enough for any table can be prepared from what is known as the "plate piece.'. It is a strip cut from the end of the ribs and contains their cartilaginous ends with a small amount of fat. This piece may be boiled until almost done and then put into a pan for roasting. Sprinkle with salt and pepper, dredge with flour and pour some of the liquid used in boiling into the pan. Baste carefully and brown nicely. Pare some white potatoes and put into the pan with the meat. They will brown nicely. If any of the meat is left, it can be cut in thin slices when cold and served with horse radish or other sauce.

Another cheap cut is the flank steak. The steak has absolutely no waste and in cold weather can be

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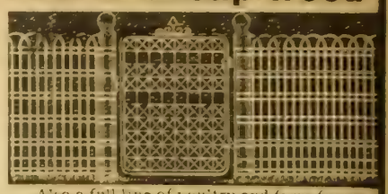

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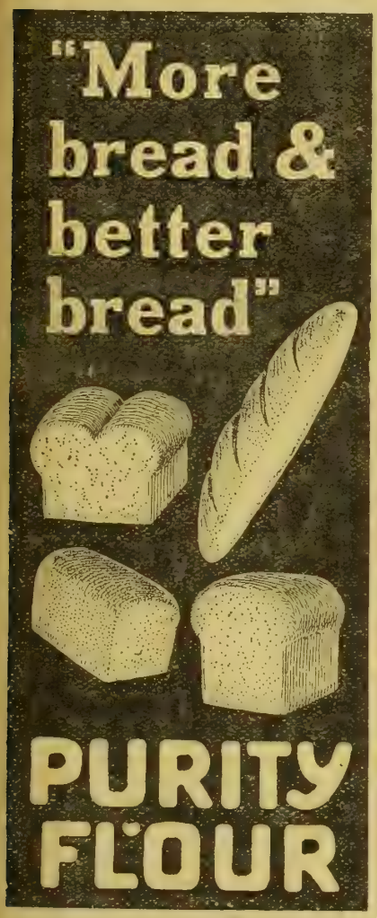

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Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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kept a week without harm. The thick end can be baked. Working from the cut end of the thick portion split the steak in such a way as to make a pocket, keeping the end and sides uncut. Fill this pocket with a good dressing. Put into a pan, season with salt, pepper, dredge with flour and drop a bit of beef drippings here and there. Baste frequently and brown nicely. Any part of this that is left can be cut in neat pieces and used as a stew with a nice brown gravy and a few carrots, an onion and the flavoring used for stews. A few pieces cut from the thin end of the steak can be put in without browning or after being browned. If preferred the thin end can be cut into strips as wide as the steak is thick. Put into the frying pan. When almost done take from the pan, season with salt and pepper, dredge with flour and return to the pan in which the drippings have been heated. Finish cooking. Make a nice brown gravy to serve with this.

Another way of serving this same cut is as a stew. Brown the slices as before an when almost done roll each slice around mixed vegetables which have been cut into strips and partly cooked in salted water. Carrots, celery and onions are a good combination.

The cuts referred to are tender, but even so, they should have slow cooking. After the surface is seared the heat should be reduced in all meat cooking. It is absolutely impossible to cook any of the cheaper cuts and have them good, if there is a fierce fire. On the other hand, it is possible to have them delicious if cooked slowly.

The neck and round are two other cuts furnishing much nutriment, there is no waste and they cost but little. Stews are usually made of the poorer cuts of meat, and hamburger steak is another familiar form of serving.

A round beef is good spiced. Rub the meat first with sugar and let stand three to twelve hours according to the size. Then rub with a mixture of all seasonings used for meat, including the various spices and a bit of saltpetre. Allow to stand as before and then rub well several days. Soak for a short time in cold water then simmer slowly till tender. Put in the cooking water the usual onion, carrot, parsley, etc.

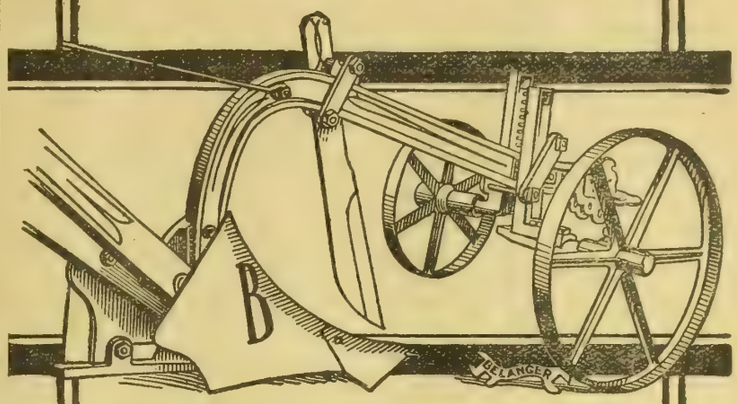
At certain seasons of the year veal is cheap. Cutlets are most indigestible as usually prepared. Trim and season and put into a pan containing quite a good deal of fat. Cook till almost done, then dredge with flour or dip in egg and crumbs and finish cooking.—Farm and Dairy.

Growing Nasturtiums.

Of nasturiums there are dwarf and climbing varieties to suit all situations, with flowers practically alike. Any ordinary well-drained soil will support them perfectly, even though it is decidedly thin. In fact, they blossom better in such earth than in very rich, for in the latter they run to leaf and are apt to rot off in wet weather, in their own dense shade, especially if at all crowded.

Sow as early as the ground is ready. The dwarf or Tom Thumb division will be in bloom in two months, insects will leave them aloneWaphids colonize unpleasantly on the climbers sometimes—and they will still be blossoming when frost comes if picked freely. This is true of most annuals in fact; liberal picking induces generous flowering, for they go on, industriously bent on producing seed, until allowed to do so.—Grace Tabor in Woman's Home Companion.

YOU DON'T NEED A SULKY PLOW—GET THIS TRUCK.



THIS truck under the beam makes an ordinary plow as solid as a sulky—takes the strain off the plowman's arms—makes it almost unnecessary to hold the handles—keeps the plow working at an even depth—makes the draught easier and more regular on the horses—makes it possible for a boy to plow as well as a man could. Anyone can put this truck on ANY plow in 5 minutes—you don't need to have one of our celebrated "B" plows to work it. The large 18-inch wheel runs in the furrow, regulating the furrow thickness and width; the small 12-inch wheel supports the plow when the plowing is too deep and the plow has a tendency to overthrow.

Remember, $5.00 will put this truck on YOUR plow—isn't that cheaper than a sulky? What's more, that price includes free delivery anywhere in Ontario, Quebec or the Maritime Provinces. Write to us for Catalogue No. 000. 5

A. BELANGER Established since 1867 at **MONTMAGNY Que**

Every Farmer Ought to Understand Roofing.

We have published two instructive books on roofing entitled **"All About Roofing"** and **"The Ruberoid Album."**

They tell why roofs leak, how long the various kinds of roofing last when exposed to the weather, how much good roofing ought to cost; and why RUBEROID is superior to every other roofing; considering its long life and low cost of maintenance. Write for these books to-day. THEY ARE FREE.

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When we send you the free books, we will give you the name of the RUBEROID Roofing dealer in your locality.

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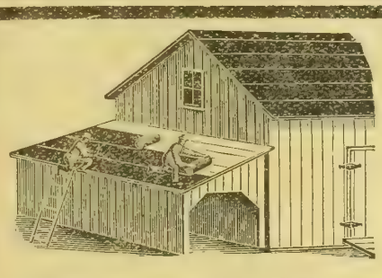

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For steep or flat roofs, waterproof, fire proof; easily laid; cheaper than other roofing.

Send stamp for Sample and Mention this Paper.

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MADE IN CANADA.

Improved Automatic Compressed-Air Sprayer

Best Hand Sprayer made at the price. An absolute necessity for every farm and garden. Will repay its cost in one season, for potatoes alone. Saves time, labor and material. A boy can do the work. Will run automatically for 6 to 10 minutes. Fitted with our Cant Clog nozzle, it is unexcelled. Drop us a card for Descriptive Circular of our 1910 model and Spay Calendar.

CAVER BROS., Manufacturers,

9 Main Street, - - GALT, ONT.

Send your name to-day for copy of this great HORSE BOOK FREE

You want to know all about your horse. The book will post you. Tells of breeds, breeding, development, marketing, handling, treatment of diseases and ailments. A practical book that every farmer and horse owner should have. We want to send you a copy. Simply write and ask for it. We pay the postage. You will find it worth many dollars to you in telling you how the old reliable stable remedy, Bickmore's Gall Cure, enables you to cure galls, cuts, sores, scratches and all of many horse wounds and ailments while you continue to work the horse. Never necessary to lay the horse off.

BICKMORE'S GALL CURE

is guaranteed to cure while horse is under harness or saddle. The great army of dealers who sell it are authorized to return your money if it fails. Buy it and have it on your stable shelf ready for emergencies. It is the standard remedy of leading horsemen, trainers, large stable owners and veterinarians. Sample Bickmore's Gall Cure sent for 6c postage. Address

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Best in design, finish and wear—
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In buying Candlesticks, Trays,
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Fruit Trees, Shrubs,
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EUREKA
COMPRESSED AIR, FOUNTAIN
SPRAYER

Requires but one pumping to empty entire contents of tank. Automatic lever valve stops flow of liquid while going from one plant to another. Easy, light, compact; tested to stand 5 times the pressure required to expel liquid. Two nozzles, with hose attachment for spraying small trees. Write for catalogue.

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Limited, - Woodstock, Ont.

Louden's Goods are Good Goods.

Hay Carriers,
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Litter Carriers,
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PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Queen Alexandra.

Editor Maritime Farmer:—

Just now when the nation is mourning a King, perhaps a short article on the late Queen would be interesting to some of our readers.

In old St. George's Chapel, about forty seven years ago, a Danish princess was married to an English prince. Royal etiquette is very exacting, and demanded that the ceremony take place on English soil. Therefore, Princess Alexandra, accompanied by her Royal relatives and guests, crossed the sea to become the wife of Edward, Prince of Wales, who was later to succeed his mother as King.

She was young and beautiful, very gentle and modest, winning at once the hearts of her British subjects. At the time of her coming, Tennyson, poet laureate of England, wrote a famous ode in which he declares, "We each are all Danes, in our welcome of thee," and for nearly half a century this sentiment has remained unchanged and the hearts of her subjects beat as true, to the sea-king's daughter to-day, as when she stood a blushing bride enveloped in bridal veil and orange blossoms.

The late Queen of Denmark was a sensible mother, very domestic in her habits, and made sure that her daughters understood all the details of household management. So this good woman, who has fulfilled the duties of Queen, wife and mother so admirably, came from a home where she had been reared in democratic simplicity. One of her girlish characteristics was the love for simple occupations and amusements, and in her life at Sardingham, was intensely interested in the affairs of the garden and dairy. The model dairy on the estate was her especial pride and her visits to it, more than occasions of formal interest.

Denmark is noted all over the world for its agricultural study and development, so it is only natural that a loyal subject should display such domestic tastes. Danish butter ranks among the best in the world, and Queen Alexandra comes honestly by her pride in farm products. She has done much in her short reign to encourage the tiller of the soil, and many a story is told of her kindly encouragement to the working and poorer classes.

Her presence at the Agricultural Fairs, her interest in the horses, cows, and dairy, was evident that she was an eminently practical woman, as well as a wise Queen.

Together with languages, music, poetry and books, she brought up her children to sew and mend, take care of their clothes and look after their wardrobe. Nor were other duties ignored, cooking and economics in the kitchen were instilled into their minds; also the care of a house and the management of servants, with fairness to all. In the best classes of European society to-day, it is well understood that a girl cannot be brought up in indolent indulgence.

Some years ago, during an exhibition of Colonial products, Queen Alexandra noticed a Canadian cheese marked with the label "The best Cheese in the world." This little phrase slightly pricked the heart still loyal to the fatherland, and as she stood by the mammoth article remarked—"I thought Denmark furnished the best cheese in the world." "No, your Majesty," replied the quick-witted Canadian, "Canada gives the world the best cheese, and Denmark the best Queen." The Queen smiled very benignly and extended her hand to the gallant boy, saying that in the future she would remember not to make such a mistake again.

AUNT BETTY.

Amatite ROOFING

A Frank Statement

HOW many manufacturers of ready roofing will tell you frankly how their goods are made?

Mighty few.

They will talk about "secret formulas," "special waterproofing compounds" etc.—ALL NONSENSE.

They don't tell you what the goods are made of because they don't dare

From the start we have never hesitated to tell the buying public just what Amatite is made of and just what it will do.

How Amatite is Made.

Amatite is made of two layers of COAL TAR PITCH—THE GREATEST WATERPROOFING MATERIAL KNOWN.

Alternating with these two layers of pitch are two layers of coal-tar-saturated WOOL FELT to give it tensile strength

On top of these four layers is a REAL MINERAL SURFACE—five layers of protection.

The mineral surface is permanent, fireproof, and ABSOLUTELY REQUIRES NO PAINTING.

It Needs no Painting.

Roofings that require PAINTING are a worry and an expense. Every year or two you have to climb up and give them a coating with some special compound sold by the manufacturers, or you are pretty sure to have a leaky roof

Amatite is Making Good

We are constantly receiving letters from customers telling us how satisfied they are with Amatite—how much better it is than the old fashioned roofing.

Year after year, in all weather, Amatite will give perfect service without any painting or attention of any kind

Surely this is the kind of service that wins and keeps customers.

Free Sample.

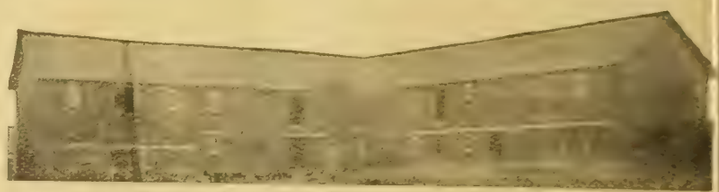
Before you go to your dealer and buy roofing, we should be very glad to send you a sample, so that you can see for yourself just what we are talking about—what a solid substantial reliable roofing we are offering to the public.

Something Back of it.

Remember, in this connection, that Amatite is made by the LARGEST MANUFACTURERS OF ROOFING MATERIALS in the world and that when you buy this roofing there is something behind it. We stand back of every roll. We know we are offering the best and the most economical ready roofing on the market.

For the sample and booklet address our nearest office

The Carritte-Patterson M'f'g Company, Ltd.,
St John, N. B. - Halifax, N. S.



Amatite on Lumber Sheds of B. F. Harris & Sons, Brighton, N. Y.

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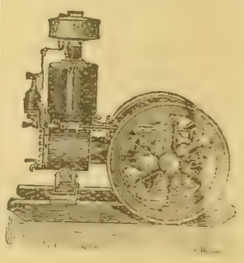
The Simplest
Gasoline Engine
Look at the cut
The **'Stickney'**

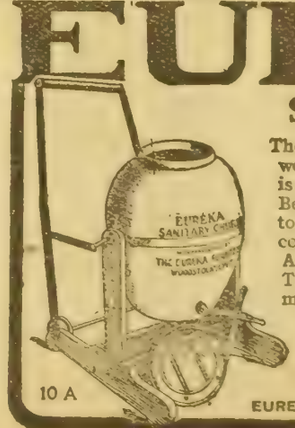


is known from the Atlantic to the Pacific because is the farmers favorite. **So Simple.**
No Pipes and Separate Tank always in the way
Strong and Heavy—Means hard work.
Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

WINDMILLS, GRINDERS, TANKS, PUMPS, Etc.

Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.
C. J. Bennett (Sales) 32 Dock St. St. John, N. B.

EUREKA
SANITARY CHURN



There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass.
Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn.
Also made with Aluminum top.
The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remain upright.
If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue.

10 A

EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.

LONG STANDING SCIATICA

Completely Cured by One Box of Father Morriscy's No. 7 Tablets.

Sciatica is hard enough to endure, and harder still to cure, in many cases, with ordinary remedies. Caused, like rheumatism, by impurities in the blood, which in this case set up an irritation of the sciatic nerve, it is so difficult to get at with external applications that many sufferers try in vain to get relief.

Mr. Charles McEachern, of Summerville, P.E.I., was in just that position until he started to take Father Morriscy's "No. 7." He writes:

"After trying several doctors and spending large sums of money without avail, I was completely cured of Sciatica of long standing after using one package of your Medicine (No. 7 for Rheumatism.)"

No matter how long you have suffered from Sciatica or Rheumatism of joints or muscles—no matter how much medicine or liniment you have used without result—try Father Morriscy's No. 7 before you give up. It has restored health to many who were almost hopeless.

50c. a box at your dealer's or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 85

A Farmer's Wife

"A farmer's wife!" Can anything be finer or more beautiful than the picture these words bring to view? Who can be prettier in a calico dress doing her daily work or looking over matters in general during the long winter evenings when the profits of the previous season are figured up and estimates drawn for the coming summer? Who can be so proud as the possessor of such a helpmate, especially if he realizes her worth? Sure no millionaire with his transitory mate can know anything about the joy of living in an atmosphere of love and practical housekeeping, where the interest of one is the common thought of both, where one takes pleasure of depriving himself of a luxury that the other may have some labor-saving convenience, as can a farmer in his comfortable home with a wife who will stay with him through success and failure until the end of things earthly. No other business in life offers the inducements to "love in a cottage" and a mutual interest as does farming; in no other walk in life may a woman be of so much assistance or hindrance to her husband as on that nearest to nature and all that is good—a farm home. There her brains shine out through the appearance of her home, her children and her husband, especially if he is wise enough to take her advice; many a farmer who has risen to prominence in his native town and State owes it all to his wife's keeping his accounts straight whereby he gained a reputation for square dealing and promptness in meeting his obligations.

In city or town the disposition and character of woman may be hidden like her face in a powder of artificiality, but on a farm she must show as she is—a worker or a drone—sweet-tempered or a scold, for she has much to try her patience and her atmosphere prevades the household, for it is her domain—not given over to hirelings nor left for the summer, but attended to daily and ruled not with a rod but by her own sweet personality. Wadsworth must have had a farmer's wife in mind when he said:

"I saw her upon nearer view,
A spirit, yet a woman too,
A countenance in which did meet
Sweet records, promises as sweet;
A creature not too bright and good
For human nature's daily food—
For transient sorrows, simple wiles
Praise, blame, love, kisses, tears, and smiles,
The reason firm, the temperate will,
Endurance, foresight, strength and skill.
A perfect woman, nobly planned
To warn, to comfort and command.
And yet a spirit still, and bright,
With something of angelic light."

The farm may not possess the perfect woman, but it shows every woman to her best advantage for every farm has in its history, success, happiness, adversity and sorrow, and these together with the richness of nature show every virtue flaw.—One of Her Admirers, in Maine Farmer.

Cement for Iron Pots.

I enclose you an item of a handy cement to mend iron pots and pans, as I have used it myself and found satisfactory.

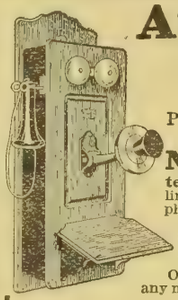
The cement is as follows: Take two parts of sulphur and one part by weight of fine black lead; put the sulphur in an old iron pan, holding it over the fire until it begins to melt, then add the lead, stir it well until all is mixed and melted, then

The electrically-welded, solid-piece frame gives strength and stiffness to

Peerless Farm and Ornamental Gates

We build Peerless Gates to last a lifetime—handy, convenient and attractive. They remain staunch and rigid through all kinds of rough usage. The frame is made of heavy steel tubing electrically welded into one solid piece. The Peerless Gate, like the Peerless Fence, saves expense because it never needs repairs. We also make poultry, lawn and farm fences of exceptional strength. Write for free book.

THE BANWELL HOXIE WIRE FENCE CO., Ltd., Box K, Hamilton, Ont., Winnipeg, Man.



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NO CHARGE for our experts' letters of advice, drawings, explanations, instructions, telling you in any language, non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

We are the largest, exclusive and the only bona-fide Independent Telephone and Switchboard makers in Canada or Great Britain.

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Our great illustrated book on the Telephone sent Free to anyone writing us about any new Telephone lines or systems being talked of or organized.

We have a splendid money-making proposition for good agents.

The Dominion Telephone Mfg Co., Ltd. Dept. K, Waterford, Ont., Canada.

Buy Hosiery Made by the Largest Mills on a 2-for-1 Guarantee

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to wear longer than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs free of charge.

That 2 for 1 guarantee—the most liberal given anywhere—is backed up by the largest hosiery mills in Canada. You can depend upon the guarantee being fulfilled to the last letter.

Buying hosiery on this plan you make doubly sure of satisfaction, for if the hosiery does not fulfill the guarantee the makers have to pay a double penalty.

But after you've worn a pair of Pen-Angle Hosiery you'll understand why we give this 2 for 1 guarantee, for you will have discovered your ideal hosiery—form-knitted, seamless, longest-wearing.

The reason for Pen-Angle superiority is due to the exceptional quality of the cashmere and cotton yarns we use. And because we knit them on Penmans' exclusive machines. We have the sole rights to use these machines in Canada.

Seamless Hosiery

These machines form-knit the hosiery to fit the form of the leg, ankle and foot perfectly, without a single seam anywhere to irritate the feet or rip apart.

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

Don't be content another day with hosiery which has those horrid seams up the leg and across the foot—with hosiery less serviceable—but get Pen-Angle 2 for 1 guaranteed hosiery

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns, 2-ply leg. 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg. 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black, light and dark tan, champagne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, $1.00; 6 pairs, $1.50.

No. 1175.—Mercerized. Same colors as 1720. Box of 3 pairs, $1.00; 6 pairs, $2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, $1.50; 6 pairs, $3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, $1.00; 6 pairs, $2.00.

No. 330. — "Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, $1.00; 6 pairs, $2.00.

Instructions

If your dealer cannot supply you, state number, size and color of hosiery desired, and enclose price, and we will fill your order postpaid. If not sure of size of hosiery, send size of shoe worn. Remember, we will fill no order for less than one box and only one size in a box.

Catalog Free

If you want something different than the styles and shades listed, send for handsome free catalog which shows an extensive line in colors. 45

Penmans, Limited, Dept. 45 Paris, Canada

Pen-Angle Hosiery

WARRANTED HIGH GRADE PENMAN'S HOSIERY

Bicycle Ball-bearings and rigid stand make the "LEADER" easy running—and there is nothing to interfere with pail being placed beneath bar to drain off the butter-milk.

"Leader Churn"

can be used either by foot or hand—sitting or standing. Made of strong white oak—sweet and clean—won't crack or chip like glass and crockery—and will last for years.

If your dealer does not handle them write for information. 54

CUMMER-DOWSWELL LIMITED, - Hamilton, Ont.

YOUR OPPORTUNITY

for securing a **Right Start** in business life is offered through a course at this reliable, old-established and progressive school. Open all year. Write for prospectus.

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Y. M. C. A. Building, Toronto.

CANADA AND THE WOOLEN INDUSTRY.

Fine worsted cloths are now being made in Canada. Such high class manufacturers as the Hewsons of Amherst, N. S., are successfully doing this business. England furnishes them with the necessary fine yarns. Tailors seem to think the goods superior in many respects to the English.

NO BETTER TIME
for entering than just Now

St. John's summers are so cool, our position so elevated and our rooms so well ventilated, that we do not find it necessary to take a summer vacation, and we have good classes during the warmest weather.

Also, students can get more attention than in winter, when our rooms are crowded.

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INVENTIONS Thoroughly protected by patent in all countries. EGERTON R CASE, Registered U. S. Patent Attorney, TEMPLE BUILDING, TORONTO. Booklet on patents and drawing sheet on request.

If you have Live Stock for sale advertise in the Maritime Farmer.

pour it out on an old iron plate or stone. When cool break into small pieces. A sufficient quantity of this compound being placed upon the crack of the iron pot to be mended can be soldered by a hot iron in the same way as a tinsmith solders his sheets. If there is a small hole in it the pot, drive a copper rivet in it and then solder over with cement.

HETHER BELL.

The Summer Care of Furs.

One is often at a loss to know just how to best care for furs during the summer season when moths, etc., are so liable to attack them. I have frequently wondered how the large furriers ensure themselves against loss from insects on the stock that they carry between seasons. Many receipts are advanced for the purpose of protecting furs from moths. While in Toronto recently I decided to find out at least one up-to-date practice in this particular. I was in Dineen's fur store and on enquiry learned that their practice was to store their furs in ordinary tar building paper.

For a fur-lined coat, for instance, strips of paper were cut off the roll and one shoved down each sleeve of the coat. A larger sheet was placed over the main part of the lining, then the whole thing was packed away.

There is no reason why anyone may not store furs in this manner. Tar building paper is very cheap, and there is usually some on hand on the average farm.

House Plant Helps.

Red spider on house plants: Pick off the worst leaves. Lay the plants on their sides and hose or syringe them thoroughly; then take soapy water and a sponge and handwash every leaf and while they are yet wet dust the under sides of the foliage with powdered sulphur.

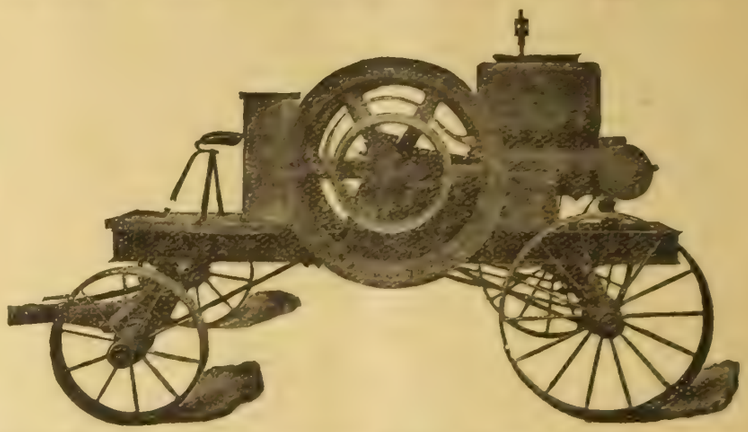
When plants have been in the indoor window-box sufficiently long to fill it with roots, fertilizer must be applied either in the form of bone-meal or rotted manure, or preferably, by the addition of weak liquid manure. This should only be applied when the plants indicate their need by a check in growth. Such a plan should afford satisfaction.

To grow fine calla lilies, put a thick layer of charcoal in the bottom of a box fifteen inches square and fill with leaf mold and a little sand. Plant a calla in each corner, and in the centre sink a six-inch flower-pot with the drainage hole stuffed with moss, and with a layer of charcoal above the moss. Water carefully till growth is well started, then fill the six-inch pot once a day with water. If the lilies drink so quickly that the pot is empty before night, refill. Wash and shower the leaves weekly.

Receipts.

Rice Croquettes.—Take a teacup of hot well-boiled rice and a teaspoon each of sugar and butter, with half that quantity of salt, and to them add one beaten egg and sufficient milk to bring all the consistency of a firm paste after thoroughly beating and mixing. Shape into oval balls and dip in beaten egg followed by a dipping in bread crumbs. Fry in sweet, hot lard, turning with care, and when done to a nice brown put into a heated colander. These are very nice to have a well-plumped rasin or candied cherry pushed into the centre befor frying and served with maple sauce.

THE GILSON
"Goes Like Sixty."
Gas and Gasoline Engine.



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Has a World Wide Reputation as
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THE GILSON ENGINE is the highest development of gas engine construction. It is the result of tireless INVENTIVE INGENUITY, RIPE EXPERIENCE, and a fixed purpose to produce the BEST THAT IS MADE.

THE GILSON ENGINE incorporates the best features of all foreign and domestic engines, and besides possesses distinguishing features not found in others.

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Our reputation for producing the highest grade engines, for fair dealing and liberal, courteous treatment and Low Prices, is one of our most valued assets.

Ask for our large Catalogue; get our prices; compare Engines and Prices and you will decide in favor of the Gilson Engine, because it is the BEST and CHEAPEST as well.

Do not allow a dealer or agent to sell you another make that is "Just as Good" as a "GILSON." Insist on having a "GILSON" and you will never regret it. Your dealer or agent makes more money by selling you an inferior machine, but what he makes, you loose.

Remember we absolutely guarantee every engine we produce.

Gilson Mfg. Co., Ltd., 127 York Street, Guelph, Ont.

Empire Cream Separator Co., Sussex, N. B., Maritime Agents. 22 9

20,000 MERCHANTS
Who sell Steele-Briggs Good Seeds
and Canada's Thousands of
SEED SOWERS
are all linked together with
CANADA'S GREATEST
SEED HOUSE
under one common object:
BEST RESULTS
STEELE-BRIGGS SEED CO. LIMITED
HAMILTON TORONTO WINNIPEG

O. K. Canadian 4 Row Sprayer.

Sprays 4 rows while you drive, no hand pumping to do. Wheels and nozzles adjustable for wide and narrow rows. Can be adjusted to spray vine 6 inches to 2½ feet high. Can be furnished with Broad Cast vineyard and tree spraying attachments.

Write for particulars.

Canadian Potato Machinery Co., Ltd.
121 Stone Road, - Galt, Ont.

CHINESE STARCH

This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

For Sale to the Trade by
MESSRS BAIRD & PETERS, St. John, N. B.

OCEAN MILLS, Mount Royal and Lasalle, - Montreal. Que.

Scab. Early and Late Blight.

(Continued from page 557.)

with the formalin solution. Avoid planting mangels, beets, turnips, potatoes, etc,, on infected land. A long rotation of hoed crops, grain and grasses is advisable as the turning under of green and other crops tends to produce a condition of the land unfavorable to the disease. Avoid as far as possible the use of fresh manures, ashes and lime, as these produce a condition favorable to the spread of the disease. Burn or feed all parings from scabby potatoes.

EARLY AND LATE BLIGHTS.

For a long time it was generally conceded that practically no infection of blight or disease occurred from the spores of the fungus wintering over in the tubers in some form or other. In fact the general idea has been that practically all the infection was due both to the presence of spores in the soil on certain nearby hot plants, which spores only awaited favorable germination conditions to infect the crop. Working on this theory, growers and experiment station investigators have assumed that repeated sprayings with Bordeaux Mixture would completely controll the disease. This assumption, however, has not in all cases proved true and recent experiments conducted at the Royal Botanical Gardens, Kew, England, indicate that a large amount of potato disease of early and late blight is produced from latent myclelium, that is a spore producing body remaining inactive in the tuber in winter, and which is consequently present in the sets when planted.

Now that the one-time suspicion that tubers carried disease over winter in this fashion has become an established fact, the great importance of preventing disease by treatment before planting is readily understood.

PREVENTATIVE MEASURES.

The presence of this latent myceluim in a potato is easily detected by removing a slice from the heel end, when it will be visable as so many thin, reddish-brown threads or streaks. All such potatoes should be destroyed by burning or feeding to the pigs. As removing a portion from the heel of a potato is more beneficial than injurious, there is no excuse for planting uncut any potatoes we may suspect of infection.

Such potatoes may first be treated with the formalin solution to destroy the scab spores and any blight spores that may be on the skin and then cut as above, and all infected or suspicious looking tubers should not only be discarded but effectually destroyed.

Never leave the old seed tubers in the ground but carefully collect and burn them. On no account plough in a field of potatoes rendered worthless by disease, as by so doiog you will infect the soil for years to come. Gather everything up and burn as completely as possible.

After taking tbe above precautions at planting, keep all the vines of the potato plant coated with Bordeaux mixture and loss from rot will be reduced to a minimum. Do not stop spraying until the veins stop growing there will always be new leaves that may be attacked by the blight spores.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Wharf at Sackville, N. B.," will be received at this office until 4.00 P. M., on Monday, July 4 1910, for the construction of a Wharf at Sackville, Westmorland County. N B

Plnas, specification and form of contract can be seen and forms of tender obtained at this Department, at the offices of E. T. P. Shewen, Esq., District Engineer, St John, N B; Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on applicatson to the Postmaster at Sackville, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, stating their occupations and places of residences. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, made payable to the order of the Honourable the Minister of Public Works, for two thousand seven hundred dollars ($2,700.00,) which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
NAPOLEON TESSIER,
Department of Public Works,
Ottawa, June 2, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

FOR SALE.

100,000 apple trees, 75,000 Pears Plums, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agents wanted on vacant territory, selling for fall and spring 1911 delivery.

THOS. W. BOWMAN & SON Co. Ltd.
Ridgeville Ontario,

Pleasant View Farm For Sale.

Farm in best fruit section of Annapolis Valley containing 115 acres land. About 40 acres orchard, 2000 trees mostly apples, but includes pears, plums, etc., 1¼ acres raspberries Good pasture and plenty of wood, fine place for dairying. 3½ miles from Middleton and Wilmot, 1½ mile from church, ½ mile from school, daily mail. 8 room house, barn room for 10 head cattle and horses, barb wire fencing, soil varies from sandy loam to clay loam with clay subsoil. Reason for selling, owner engaged in other business which requires all of his attention. For price and terms apply to the owner.

EDWIN J TUCKER,
Spa Springs, N. S.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B.

Feeeing Potatoes to Live Stock.

Owing to unsatisfactory prices received for potatoes, many farmers are feeding them to stock, especially swine. A Vermont farmer in the vicinity of Montpelier is reported as having 1000 bushels in his cellar, and is boiling them at the rate of 25 bushels daily and feeding them to cattle and hogs. In that vicinity potatoes are retailing at 40 cents a bushel, but farmers are receiving only 20 to 30 cents. Some argue that potatoes are worth 30 to 35 cents a bushel for feed, considering the high price of grain. However, it is doubtful if the farmer can get that much value from his tubers, even though they are cooked for the stock.

In this connection it is interesting to note some of the experiments at different agricultural colleges. At the Wisconsin station hogs ate cooked potatoes better than uncocked, and 445 pounds cooked potatoes were equal to 100 pounds corn meal for feeding value. One pound dry matter of corn meal is superior to one pound dry matter of potatoes for making gains with pigs. In France, Girard fed 55 to 66 pounds cooked potatoes per day to fattening steers and 4 1-2 to 6 1-2 pounds to sheep. for milch cows 25 pounds daily per 1000 pounds live weight is the limit. For yearling ewes and wether sheep 25 pounds of potatoes daily to 1000 pounds live weight is advised. Stock should not be watered soon after eating potatoes but preferably about a half hour before eating.

The Vermont station states that butter from cows fed potatoes is inclined to be salvy and keep poorly. It is stated that potatoes at a higher price than 15 cents a bushel is more costly feed than is corn silage. In Michigan potatoes lessened digestibility of other parts of the ration, although the same experiment showed no particular ill effect upon the milk or butter. The Ottawa station in Canada reports that potatoes either raw or cooked were unsatisfactory rations for hogs. Even when I fed with skim milk grain had to be added. It is recommended that the tubers be cooked for hogs and fed with grain.

Relative to feeding raw or cooked, there are varying opinions. The Wisconsin station believes potatoes should be cooked, especially for swine. The Minnesota station found that potatoes were no more digestible when cooked than when fed raw to swine, but that pigs ate more when cooked.

Summer Orchard Meetings.

To give practical demonstrations of pruning, grafting and spraying work the following list of meetings will be held to which everybody interested is invited. The addresses and demonstrations will be given by S. L. Peters, the well-known Queens County fruit-grower, and A. G. Turney, Provincial Horticulturist, in an orchard at or near the places named:

Tuesday, June 21, 9 a. m., St. Leonards, Madawaska Co.

Wednesday, June 22, 9 a. m., New Denmark, Victoria Co.

Thursday, June 23, 1.30 p. m., Upper Woodstock, Carleton Co.

Friday, June 24, 2 p. m., Keswick, York Co.

Saturday, June 25, 10 a. m., Maugerville, Sunbury Co.

Monday, June 27, 2 p. m., Mouth Jemseg, Queens Co.

Tuesday, June 28, 2 p. m., Hampstead, Queens Co.

Wednesday, June 29, 2 p. m., Hampton, Kings Co.

Thursday, June 30, 2 p. m., Salisbury, Westmorland Co.

Friday, July 1, 2 p. m., Dalhousie, Restigouche Co.

Saturday, July 2, 10 a. m., New Brandon, Gloucester Co.

Monday, July 4, 2 p. m., Black River, Northumberland Co.

Tuesday, July 5, 2 p. m., Bass River, Kent Co.

Wednesday, July 6, 2 p. m., St. Marys, Kent Co.

Friday, July 7, 2 p. m., Shediac, Westmorland Co.

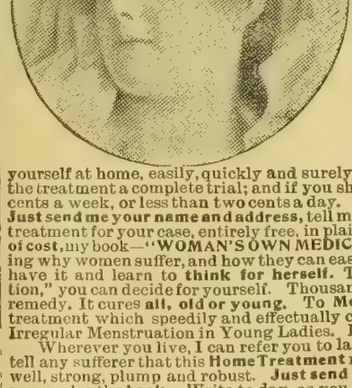
Colt Followiug Mare.

(Continued from page 564.)

times he takes a few swallows from the maternal fount. Taking all these hindrances together, much time is lost. While the colts are very young it is better for them if the mares can be driven to the barn in the middle of each half day so the youngsters can suck, and this ordinarily takes less time than the colts would waste in the field. It is not safe to take the colts to the field and tie them up. When left in this way they can find more ways of tangling themselves up than you would believe possible. Many colts have been chocked to death in this way. A tight box stall with a little oats and hay to nibble is the best place for colts in the day time until they have become accustomed to being separated from their dams. After they have become reconciled to this they can be turned into the pasture when the mares are taken out to work and will soon learn to be on hand at the gate at noon and night, ready for refreshments.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.



I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure—**you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhœa** or **Whitish discharge, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weakness peculiar to our sex.**

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters**, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all women's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H 309 - WINDSOR, ONT.

HEADACHE

AND

Burdock Blood Bitters.

The presence of headache nearly always tells us that there is another disease which, although we may not be aware of it, is still exerting its baneful influence, and perhaps awaiting an opportunity to assert itself plainly.

Burdock Blood Bitters has, for years, been curing all kinds of headaches, and if you will only give it a trial we are sure it will do for you what it has done for thousands of others.

Headache and Constipation Cured.

Mrs. John Connors, Burlington, N.S., writes:—"I have been troubled with headache and constipation for a long time. After trying different doctors' medicine a friend asked me to try Burdock Blood Bitters. I find I am completely cured after having taken three bottles. I can safely recommend it to all."

For sale by all dealers.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Underdrainage in Nova Scotia.

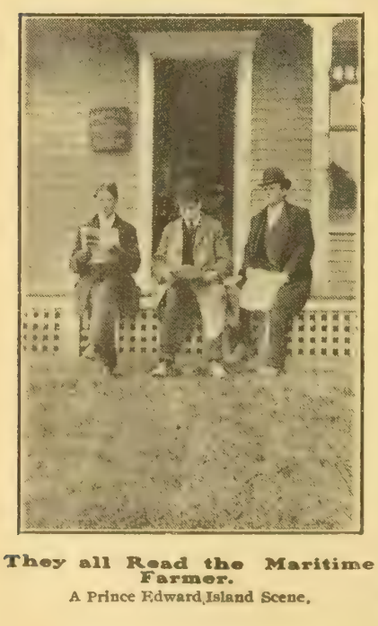
The officials of the Nova Scotia Agricultural College are endeavoring to launch a scheme to encourage the more extensive under drainage of the farms of that province. Many of the best farms are already well underdrained and many other farms do not require an artificial system of drainage, but the vast majority of the arable lands of the province are sadly in need of systematic underdrainage. Climatically Nova Scotia is splendidly adapted to a high type of agriculture and the soils are suited to almost all crops that will grow in any other part of Canada. The one draw back is that, owing to the cold winds which blow in from the Gulf of St. Lawrence to the north in the early spring, seeding is delayed some two or three weeks later than, for example, in the province of Ontario, and while this is partly off-set by the more humid conditions of the summer and a long fall season, yet on wet, heavy lands, it makes the growing season too short for the best development of crops. The need of underdrainage, it will, therefore, appear, is even more urgent than in the inland provinces.

At the 1910 session of the Legislative Assembly in Halifax, an Act entitled "The Tile, Timber and Drainage Act" was passed similar to the like Act in the province of Ontario. According to this Act, Municipalities are empowered to borrow money and to advance it to farmers who purpose under-draining land on a basis of between 7 per cent. and 8 per cent. per annum, which includes interest and sinking fund which will redeem the debt in a period of 20 years. This means that for an expenditure of $8.00 per year for a period of 20 years, farmers can have $100 worth of drainage on their farms. Those who have had even a very little experience will appreciate the percentage return which may be had from this comparatively small investment. For with $100 worth of drainage, it is easily possible to increase the crop producing power of the land on a given farm anywhere from $25.00 to $100.00 or more dollars per year. According to the Act, this interest and sinking fund is to be collected along with the ordinary taxes. The Act is a good one, but we doubt if at present there is sufficient public sentiment to urge the Municipal Councils to move in the matter. It is hoped, however, that as public sentiment grows, this objection will be off-set.

As another means to encourage underdrainage, the College has advertised the fact that they will send men to make drainage surveys of farms it is purposed to under-drain. All that is required of farmers who wish such survey made, is that they pay the travelling expenses and entertain the men while they are engaged in the work.

What is at present, however, proving the most effective means of encouraging under-drainage, is the purchase by the College of a Buckeye Traction Ditcher, which has now been in operation some two weeks and is giving excellent satisfaction. The College is taking contracts to dig drains with this machine at about one-half the cost of doing the same by hand, with the added advantage of the work being accomplished with quick dispatch. The machine is under the management of Mr. F. F. Fuller, Superintendent of Agricultural Societies. During the past two weeks this ditcher has been operating in the vicinity of the College, but in a few days it will move to the Stewiacke Valley, where a number of farmers have given contracts for the draining of their land. For the present year, at least, the price of drainage with this machine is made so low that the College will lose money. But in classic phrase "What is our loss is the country's gain." The main idea in view is to get as much land under-drained as possible during the ensuing summer and thus afford an extensive demonstration of the advantages of the process. Should the College operated machine prove popular, it is hoped that it will pave the way for private enterprise to take hold of the matter. At least, this is what has resulted from a similar policy in connection with the encouragement of draft horse breeding in the province.

The Annual Report of the Secretary for Agriculture for the Province of Nova Scotia, which has been extensively circulated, and of which there are still a few copies left for free distribution, contains a series of educational articles on the various phases of drainage and gives instructions for the laying out of a system, as well as for the various details of digging and grading of drains. All well wishers of agriculture cannot but hope that this campaign issuing from Truro will prove highly successful, for under-drainage, in more senses than one, is one of the most fundamental considerations in the development of a profitable agriculture.



They all Read the Maritime Farmer.
A Prince Edward Island Scene.

Soiling Cows for Dairy Profits.

Editor Maritime Farmer:—

The time of year has rolled around again when we farmers turn our cows out to pasture. I trust the time will soon come when early pasturing will be forgotten, for, as we all know, while the green plants are so tender there is not much nourishment in them, and in consequence, the cows continue travelling all day looking for something that "satisfieth not." Besides the extra amount of labor in travelling around the cow is damaging the young roots of grass to such an extent that it scarcely ever recovers so as to give its full growth again during the following summer. If the grass is not allowed to get to a reasonable height before pasturing it does not draw so large a proportion of its food from the atmosphere and it therefore receives a double set back in growth, first from being tramped down and secondly by loss of foliage. I think grass should be at least eight or nine inches high before cows are turned out to live on it, then it will scarcely ever be eaten off until a sufficient supply of green feed can be cut from oats, peas and vetches sown at different times from early and successive sowings at intervals of ten days until the twenty-fifth of June. A satisfactory mixture would be 25 lbs. of vetches, 25 lbs. of peas and 60 lbs of oats to the acre. I have scarcely ever seen satisfactory resu,ts from sowing later than June 25th, as it is apt to become rusted and be unfit for good feed.

When you see a farmer that sows plenty of green feed he is never complaining of dry summers and short pastures, neither does he complain of his cows drying up or his returns from the cheese and butter factory not being satisfactory. There is no danger of having to much of this green feed, for if there is any more than can be used in summer, it can be cut before it gets too ripe and made into hay. It will grow three or four tons to the acre when cured. When the peas, oats and vetches are used up the corn will be fit to feed and the two being fed together makes better feed than any pasture at that time of year. The corn can be left standing in the field until the last of September, when it can be cut and stood up in stooks until the first of November, when it will be cured enough to be stood up in the barn and fed for another month, which will keep your cows almost to their full milk well into the winter, and thereby greatly increase the profits from dairy cows.

F. GLYDON.

Margate, P. E. I.

Treatment of Scours in Calves

There are many treatments advanced from time to time in the columns of the agricultural press in regard to the treatment of scours in calves. In my experience there is no equal to the formalin treatment, when it comes to dealing with this dreaded malady.

The cause of scours is said to be a germ entering the navel of young calves. Damp quarters, milk from newly freshened cows fed to other than their own calves, milk too cold, etc., are predisposing causes. In any case, the trouble should be investigated and the cause removed if possible.

The formalin treatment, as I apply it, is: One-half ounce (five cents' worth) of formalin diluted with 15½ ounces water (nearly a pint).) A teaspoonful of this solution fed in about a pint of milk, three or four times daily, has always brought about an immediate cure.—G. A. Brethen.

A P. E. I. Indian.

Of Interest to N. B. Fruit Growers

The Provincial Department of Agriculture, through A. G. Turney Horticulturist, is prepared to assist all those who wish advice in regard to planting apple, plum, and cherry trees or small fruits in the spring of 1911 if they will write him at Fredericton, stating particulars in regard to site and soil upon which it is intended to plant, what crops are growing thereon this summer whether the orchard is intended chiefly for home use or for market and stating any special preference for certain varieties of apples, etc.

With a knowledge of these particulars, Mr. Turney will be able to give the enquirer advice based upon his study of conditions and the suitability of varieties to the various parts of the Province. He will also undertake to place and personally select any orders sent to him from the very best stock grown in the Province so long as the supply lasts and after that from reliable Canadian firms elsewhere. By taking this course the purchasers may avoid planting undesirable varieties and loss through misrepresentation and mistaken advice from unreliable agents. It is urged that orders for 1911 be placed as early as possible this year so that the stock may be early selected and only the best trees taken. Later orders will, of course, have to be filled from what is left after selected stock is booked.

Care of Wool on the Farm.

The sheep shearing season is here again and a little thought on the care of the wool will be of profit to all. At a recent outing of the Connecticut sheep breeders' association to the woolen mills of the Stafford worsted company a few points were emphasized which are important to sheep raisers.

The first thing that needs attention in producing the cleaner wool is to see that our feeding racks are of such construction that a minimum amount of hayseed and chaf will work its way into the fleece while feeding, for if it once gets into the the wool it is there to stay.

The second is to see that the sheep have a clean bed so that the wool will not become unnecessarily soiled.

The third is to have a clean floor for shearing. Never shear a sheep on a barn floor covered with dirt and hayseed. First sweep it clean and then keep it clean. When you are ready to take up the fleece be careful that nothing but wool goes into the bundle, and that all wet and dirty locks are removed and put into a separate package.

The last point is to tie each individual fleece into a neat, compact bundle with the proper kind of twine. Neve

Corrugated Iron

Gananized, Rust-Proof Made from very finest sheets, absolutely free from defects.

Each sheet is pressed, not rolled, corrugations therefore fit accurately without waste. Any desired size or gauge, straight or curved.

Low Prices—Prompt Shipment.

The Metallic Roofing Co.,
LIMITED,
MANUFACTURERS,
TORONTO and WINNIPEG.
(47)

use sisal or binder twine, as the fibres are sure to break off more or less and stick to the wool, and as they will not take the dye the same as the wool they must be either picked out by hand or the entire fleece goes into a cheaper grade, and in either case the producer is the loser. Instead of this use regular wool twine, which will take the dye, and so is not objected to by the buyers. Use two or three strands around each bundle each way and tie them tight as the buyers would rather pay for a little extra twine than to have the fleece come apart.

If every producer of wool in the Maritime Provinces will endeavor to have his product as clean and attractive as possible we shall soon find that we are getting better prices and sheep raising will become still more profitable.

Ragwort Eradication.

Editor Maritime Farmer:—

"What course has the East Pictou County Council of Women taken to try and eradicate the obnoxious weed called ragwort from their County", you ask—having heard of its endeavors in that direction at the Farmers' Parliament held in New Glasgow in January last.

The answer is in this wise. Realizing the curse that this rank weed is to the farming interests in the County of Pictou, which in many of its sections is ablaze in the late summer and autumn with its bright yellow bloom, and knowing that it has been officially credited as being the cause of the cattle disease in the said county, the Woman's Council, which is patriotic in its purpose, decided to enter into a crusade of extermination. The school children were enlisted into the service. Through the local press and visitations of the schools the scheme was made known. Prizes were offered, as far as the money at the disposal of the Council would admit, to those collecting and burning the largest number of stalks—a reliable person in each locality, generally a school trustee, certified to the number and the burning. Prizes were also given to the seven highest schools competing. This plan was adopted for the first year. Some thirty schools competed. The largest individual collector of stalks numbered 179,000.

Finding that this plan resulted in disappointment to the children who, although working faithfully, fell below the prize mark, a change was made for the two following years in the manner of the rewards. Five cents per thousand was offered, thus securing payment to every one who cared to enter into the contest, while the ten highest were awarded special prizes according to their rank in numbers.

Several sections of the County carried on the work faithfully and reported a decrease of the weed as the result, but the apathy of the farmers was a serious obstacle to the work. Some were averse to the children handling the weed; others thought it too hard work; some thought the propaganda a useless one, and some were satisfied with the keeping of their own farms clean and were not concerned with the highways and vacant lands where the greatest quantities were to be found.

To make such a scheme a success teachers and parents must co-operate. The first prize boy of the first year has kept up his interest all through and has added much to the extermination of this enemy to good farming in his native land—but single handed it is a most discouraging game.

CAROLINA CARMICHAEL.
New Glasgow, N. S.

FLORICULTURE.

All enquiries in this department will be answered by H. E. Goold, Florist, Sussex, N. B.

M. A. H. writes: How shall I plant my Gladiolus bulbs and how deep?

Gladiolus bulbs should be planted the last of May. The best method of planting them so as to enable them to stand the dry weather, is to make trenches four or six inches deep and cover the bulbs with two inches of soil, fill the trenches up as the plants grow.

Preennials grown from seed should now be large enough to set out the last of May in their permanent quarters in the flower garden.

A. O. G. writes: Can I grow asters in my tulip beds after they are done blooming?

Yes, we plant our seeds in plots or hot beds the last of April. Then transplant them in boxes or hot beds until the tulips are done blooming in June, then put your asters in the beds between the rows of tulips, the leaves will shade the plants from the sun.

May is the month to plant in open ground all hardy annuals, such as Arctotis Bartonia, Carepsis Gillia, Gomphrena, Marigold, Wall Flower, etc. Also half hardy annuals may now be sown such as Canary Vine, Balloon Vine, Gaillardia Schezanthus, also Mignonette where it is to stand, it does not transplant well. Morning Glory, soak the seed in warm water to aid germination. Nasturtiums, the vine kind, are particularly adapted to waste places. Plant Petunias and all members of the Poppy family, also Snap Dragons, Linnias and Sweet Peas, the last named as early in the month as possible.

Tender annuals, which includes Amaranths, Castor Beans, Colossa Hop, Ice Plant and Ornamental Gourd, may be sown in a hot bed in pots to hardened off and subsequently taken out for planting when the ground is thoroughly warm.

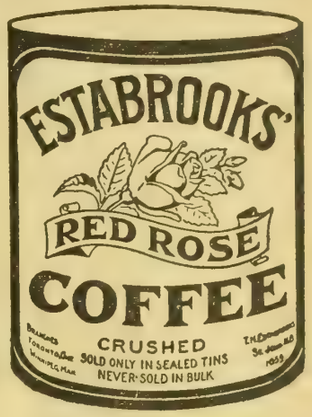
When all danger of frost is past, (usually about the middle of June here) say the first week in June, plant out all kinds of bedding plants such as Asters, Begonias, Colius Abutilons Cannas. Cannas are the best started in the house.

Dalhias may be planted the last of May. We do not sprout them, but put the bulb straight down leaving only a little of the old dead stalk in sight.

Plant Peonies and Lilies if you did not get them in the fall.

The new Crushed Coffee as compared with Ground Coffee

Merely to look at it you will see how very different it is; Crushed Coffee being in small even grains, totally free of chaff or skin while ground coffee has the appearance of being mashed; large and small grains with chaff or skin mixed together.



Red Rose crushed Coffee, being free of the chaff, can be made as easily as Red Rose Tea. Settles clear and bright. No egg or anything required. Just look at our crushed Coffee and see how correctly we describe it.

A good combination is Estabrooks' Coffee for breakfast and Red Rose Tea for other meals.

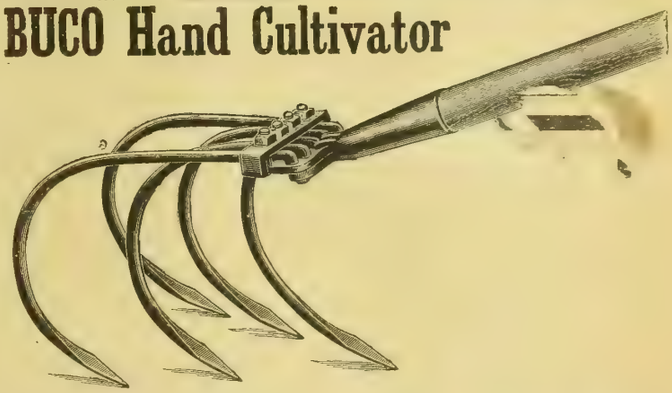
Estabrooks'
RED ROSE
Coffee

ORDER A TIN IN TIME FOR BREAKFAST

15

The BUCO Hand Cultivator

Handle 4 1-2 Feet Long



The greatest tool made for weed destroying and cultivation. It takes the weeds out BY ROOT, and loosens soil thoroughly to desired depth, leaving it fine and smooth. It gets over the work quickly, and saves immensely on labor. The prongs are OIL TEMPERED spring steel, and can be quickly adjusted to any desired width without removing. Head is malleable, and handle best white ash. Sold by hardware trade. If your dealer cannot supply them write us direct.

Manufactured by
Bailey-Underwood Co., Ltd., New Glasgow, N. S.

One writer says: I planted my vegetable garden in rows, putting a pinch of Shirley Poppy seed among the beets and carrots. They opened in every shade from the finest pink to almost black, the beet and carrot leaves making just the right back ground, making a very beautiful garden with so little expense.

Blue For-get-me-nots in company with White Tulip bulbs give a very pretty effect. White perennial Gypsophila is inexpressively lovely, blooms faithfully and makes a most delightful addition to a bouquet. Then there are the tall Shasta Daisies and White Cactus Dalhia, the stately Lilies and Holly Hocks are worthy additions as are also the Peonies and Iris. In the latter there are beautiful blues—all so pretty and lasting.

STOCK NOTES.

Pure Bred Stock for New Brunswick.

The sale of Clydesdales, Shorthorns and Ayrshires imported to New Brunswick by Mr. A. H. Thompson, at the request of the Department of Agriculture, took place at McGrath's Stables, St. John, on the 9th inst., F. L. Potts acted as auctioneer and W. W. Hubbard, Secretary for Agriculture and R. H. Arnold assisted Mr. Thompson.

Buyers got splendid value for their money. The cattle were especially imported to improve the dairy herds of the province, this being the first time in many years Shorthorns of the milking strain were offered to the farmers of Canada. With the exception of two Ayrshire bulls, and one of the Clydesdale mares, the purchasers were all made by New Brunswick people. The following is a list of the cattle, horses, buyers and prices.

Shorthorn Bulls.

No. 1—Doune Gladiator, red, calved May 5, 1909, purchased by Frank C. Smith for Dr. Judson Hetherington, Cody's, Queens county, for $135.

2.—Nugget's Pride, red calved July 10, 1909, Scott A. Shaw, Hartland, Carleton county, for $150.

3—White Emperor, white, calved July 28, 1909, Alfred W. Jonah, Hillsboro, for Albert county Agricultural Society, for $90.

4—Grandiant III, white, calved 1909, George A. Perley, Maugerville, Sunbury county, for $77.50.

5—Westward Prince, roan, calved April 20, 1909, W. T. Wood, Sackville, for $168.

6—Stanley, roan, calved June 5, 1909, Donald Fraser, Plaster Rock, for $135.

7—Keneth, roan, calved July 27, 1909, Albert Anderson, Sackville, for $169.

Total received for Shorthorns—$924.50.

Ayrshire Bulls.

11—Greenslack Great Fortune, red and white, calved March 30, 1909, J. F. Roach, Sussex, for $150.

12—Greenslack Better Fortune, chocolate and white, calved March 25, 1909, Alex. McDonald, for $100.

13—Adamhill Sambo, white, calved April 1909, Samuel Bigelow, Canning, N. S., for $105.

14—Adamhill Jumbo, brown and white, calved March, 1909, Samuel Bigelow, Canning, N. S., for $175.

There were three Ayrshire cows, but only one was sold, the others not being offered. Alexander McDonald, of Fairville, secured the one sold—Gardrum Flora 3rd, white, calved May, 1908, for $130.

Clydesdale Mares.

Jeannie Frew, dark brown, foaled June, 1907, A. E. Trites, Sussex for $275.

Princess Lorna, bay, foaled 1907, Retson Bros., Truro, N. S., for $265.

The Clydesdale stallion, Prince of Bromley, bay, foaled April 25, 1906, was withdrawn. The highest bid secured was $800.

The total amount received from the sale was $2,024.50.

Poland China Pigs.—Mr. Lemuel Cudmore, of Prince Edward Island, writes:—"Please tell me where I can procure pure bred Poland China Pigs."

Maritime Breeders of Poland Chinas would find it to their advantage if they would carry an advertisement in our columns.

The PUBLISHER'S DESK.

Lighting the Country Home.—Ten years ago, it was customary for the man who was showing his country home to his friend from the city, to say, apologetically, "Of course we haven't the conveniences here that you have in the city, but you can't expect to have everything you want when you live so far away from the city." In recent years, however, modern progress and invention have given more serious attention to the home in the small town, and there is a growing disposition on the part of

DIAMOND E BRAND MANILLA BINDER TWINE

WE GUARANTEE OUR BINDER TWINE TO BE FREE FROM SNARLS, THIN OR UNEVEN SPOTS; AND TO PLEASE YOU IN EVERY WAY, OTHERWISE WE WILL REFUND YOUR MONEY

NOTE OUR LOW PRICES FOR DELIVERY TO YOUR NEAREST RAILROAD STATION

8.00 FOR 100 LBS.
DELIVERED IN ONTARIO

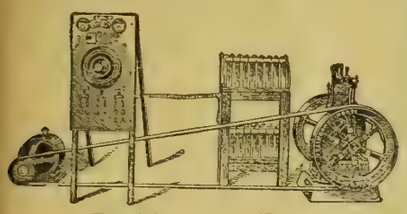
8.50 FOR 100 LBS.
IN QUEBEC OR MARITIME PROVINCES

Farm Implements in Our Spring and Summer Catalogue

THE T. EATON CO. LIMITED
TORONTO - CANADA

Our Grocery Catalogue is Mailed Free upon request

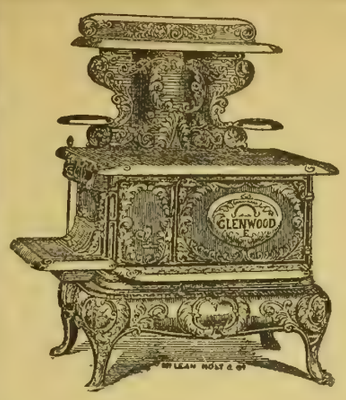
the man who dwells 'far from the madding crowds' to insist on just as much comfort as his city brother. It is now no uncommon occurrence to find a country home equipped with bathrooms, hot and cold running water and electric lights in every room. For lighting country homes several plans have been devised, but the most modern and successful is the electric lighting plant illustrated below.



Residence or Factory Fairbanks Morse Electric Lighting Plant.

This outfit will operate 50 15-watt, 12-C. P. Tungsten lamps as steadily and reliably as a city plant. It offers a relief from the dirt, danger and unsanitary condition arising from old methods of illumination, and gives an economical light that is both safe, convenient and healthful. In fact, there is no substitute for for the soft, white light diffused by Tungsten Lamps—it is even said to rival day light. The same engine can be used for operating a pumping plant or other machinery. The engine operates on gas or gasoline. The outfit includes a Fairbanks-Morse Special Gasoline Engine and Dynamo, Storage Battery, Switchboard, Lamps and Sockets. Everything is furnished except the wire which can easily be obtained anywhere. The Dynamo will operate 50-15 watt tungsten lamps for a fuel cost of five cents per hour with gasoline at ten cents per gallon. This is certainly very cheap, considerably cheaper than the city dweller can purchase his lights. The dynamo can be run during the hours when the most light is needed and the extra power is stored up in the storage battery. This arrangement makes the light available at all times whether the engine is running or not. When fully charged the storage battery will run 9 lights for 8 hours, 13 lights for 5 hours, 18 lights for 3 hours or 80 lights for one hour. The outfit is easily cared for, is durable afficient and occupies very small space and is proving wonderfully popular for high class country residences and farms. It is being sold in Canada by The Canadian Fairbanks Co., Limiteh.

Summer Resorts.— Experience, the testimony of thousands, and the popularity of the several fishing, hunting and tourist districts located on the lines of the Grand Trunk Ry. system, is conclusive proof that they are the Elysium of the sportsman, and the Mecca par excellence of the tourist. The "Highlands of Ontario" is a land dotted with lakes and rivers, rivers that have their source in the northern forests and flow until they join the vast inland seas, Superior, Huron, Erie or Ontario, whose waters are in turn, borne by the broad St. Lawrence to the Atlantic Ocean. This great Tourist Railway reaches all the principal resorts in this vast territory, including Lakes Orillia and Couchiching, the Muskoka Lakes, a popular resort 1000 feet above sea level, where thousands of people annually make their summer homes for rest and recuperation. The Lake of Bays District where some of the finest hotels in Canada are to be found and a locality replete with natural beauty gnd loveliness, with splendid fishing—Maganetwan River, the very heart centre for sport—for rod and gun—Lake Nipissing and the French River, where wild and rugged scenery is to be found, and the atmosphere filled with health giving properties, splendid fishing and hunting grounds are found in this territory. The Temagami region, a forest reserve containing 3,750,000 acres of lakes, rivers and wilderness, the scenic grandeur of which is incomparable. Magnificient fishing and hunting in season. The 30,000 Islands of Georgian Bay is another most helightful and beautiful territory, where the most interesting trips may be taken. The steady increase of travellers to this locality is alone proof that it is becoming the most popular resort on the inland lakes. The Algonquin National Park of Ontario, a comparatively new and attractive region, little known to the lovers of rod and gun and the tourist, has all the summer attractions that appeal to the denizen of the city. This territory has been set aside by the Provincial Government of Ontario solely for the delectation of mankind. The gamiest of black bass, speckled trout and salmon trout are found here in goodly numbers. Hunting is not allowed. The Algonquin Park covers an area of 2,000,000 acres, there being no less than 1,200 lakes and rivers within its boundaries. Good hotel accomodation is found in all the districts mentioned, and a postal card addressed to the General Advertising Department, Grand Trunk Ry. System, Montreal, will receive prompt attention, and illdstrated publications of any of the districts will be quickly sent to all enquirers.



No Matter Where you live, When you buy a Glenwood Range you Have the Same Advantage as Those Living in St. John.

In order to give the people in the Maritime Provinces who want one of our Glenwood Ranges the same privilige the people in St. John enjoy, we prepay freight to your booking station.

51 Ranges sold in April and 30 sold in May is record of how our Glenwood Ranges suit the people, what they are doing for hundreds they will do for you. We have them in all sizes and styles and we can give you ranges from $25.00 up.

Send for Catalogues, We make all our ranges in St. John, they have the material and workmanship in them, and every one will give you satisfaction.

McLEAN-HOLT & CO., 155 Union St., - - ST. JOHN, N. B.

Maritime Wire Fence Stands the Strain

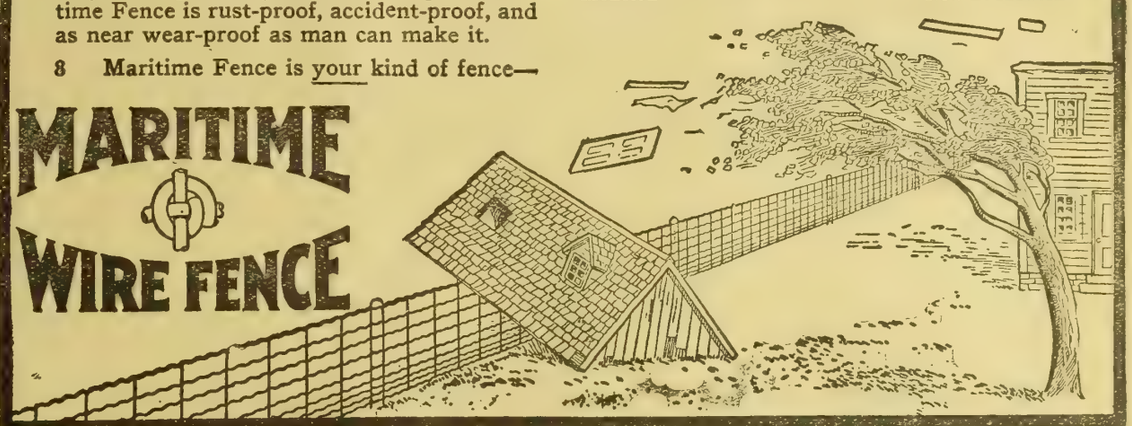
of unexpected accidents, without a flinch. It holds under the most trying conditions. Maritime Wire Fence makes good because Maritime material is first quality, and Maritime workmen excel in their calling.

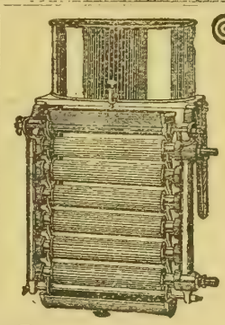
All Maritime Fence is made from extra heavy smooth No. 9 wire, so thoroughly galvanized that it won't peel. The Maritime lock holds the joints so rigidly that they can't give or pull out of shape. Maritime Fence is rust-proof, accident-proof, and as near wear-proof as man can make it.

8 Maritime Fence is your kind of fence—made as you would make it yourself—if you could. Maritime Fence is true economy for you. It is made and sold upon honor. Costs no more than inferior fence. Send now for our free fence booklet. Tells you everything you want to know about fences. Write while you are thinking of it. It will pay you,—pay you well.

New Brunswick Wire Fence Co., Limited
Moncton . . . . . New Brunswick

MARITIME WIRE FENCE





The Secret of Pure Sweet Milk

You dairy-farmers can't afford to ship impure, germ-laden milk into the towns and cities. Our medical authorities are urging the Government to penalize offending dairymen very severely—don't you run any risks. If you pass all your milk through the Root Cooler-Aerator **immediately** it leaves the cow, you can guarantee it pure and sweet and get a bigger price for it per gallon. The

Root SANITARY MILK Cooler-Aerator

will keep the milk sweet for 48 hours because it kills the animal heat quickly and cools the milk to the same temperature as cold running water. The water is admitted at the bottom, flows through the bottom tube, then from the water column into the second tube and so on until it reaches the top tube. Thus the cylinders are kept perfectly cold all the time, and as they are deeply corrugated the milk flows down them slowly, reaching the retaining pan thoroughly cooled and aerated. Cylinders are made of heavy copper, heavily coated with pure tin and guaranteed to stand heavy water pressure. Perfectly simple to operate—no complicated parts—a child can easily clean the whole machine in 5 minutes. Made in various sizes—will cool from 40 to 75 gallons an hour. Write us to-day for catalogue and prices—every dairyman should have a Root Cooler—it's a big money-maker. Address:

W. A. Drummond & Co., 185 King St. East, Toronto

6

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. MCLEAN & SONS, Hopewell, N. S.

SHORTHORN BULLS for sale. WALTER EATON, Upper Canard, Kings, N. S.

S. C. B. LEGHORN and White Pekin Duck eggs at $1 00 per setting. Mention this paper C. Y. YOUNG, Digby Co., N. S.

SINGLE COMB BROWN LEGHORNS only. Circular. ROCKWOOD POULTRY YARDS, St. John, N. B.

R. C. REDS and Imperial Pekin duck eggs $1.00 per setting. Imported stock, EGBERT DEYONG, Dartmouth N. S.

WANTED—Woman or girl for general house work. Good wages. MRS ROWLAND FIRTH, Mount Pleasant Ave., St. John, N. B.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

IMPORT Bulbs and perennials direct from Holland at quarter price Get import list at once. MORGANS SUPPLY HOUSE, London, Ont.

FOR SALE—A pure bred Chester White Boar, good size, sure stock getter, or would exchange for one year old sow in farrow. NORMAN ZWICKER, Mahone Bay N. S.

WANTED.—To trade a new gasoline engine for second hand portable steam engine 8 to 15 horse power. Write describing engine to B. care MARITIME FARMER, Sussex, N. B.

FOR SALE New pumping wind mill and steel tower Second hand steam boiler 8 H. P good repair. Also 3 H. P. second hand steam engine. Write J. D. FRIER, Sussex, N. B.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

SITUATION WANTED by Englishman aged 42, to manage dairy farm or herd. Used to Jerseys, (pure bred), calf raising butter-making, pigs, poultry. Box D, MARITIME FARMER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables etc, Catalogue free —MORGAN'S POULTRY SUPPLY HOUSE, London Ont.

THREAD POWER FOR SALE.—I have a two horse Moody thread power that I will sell cheap and on easy terms. The thread power is in a good state of repair and has not been used extensively. For particulars, write "Power" care MARITIME FARMER, Sussex.

WANTED Young men who desires to learn the trade of blacksmithing, woodworking, body making, painting, trimming or machinist, also men experienced in the above trades, with reliable concern in one of the healthiest cities in the world. Write full details, giving references, age, experience, if any, and whether single or married. Address, H. V. KIMBLE, Care Studebakers South Bend, Indiana.

HELP WANTED.—Men and women wanted to sell to mothers reliable article much needed in every home, especially used by workingmen Splendid opportunity for bright young men and women Good salary—exclusive territory—permanent position. Commissions from repeat orders will alone assure good annual income. Write to-day.—SELLERY, Dept. Q., Higgin's Block, Moncton, New Brunswick.

Irish Cobbler, Triumph, Green Mountain and Delaware

Choice SEED POTATOES

Now on hand.

Send your order in early.

CLEMENTS & CO.

Cor. Queen and Westmorland Streets, Tel. 111-31.

Fredericton, - - N. B.

Kyle's Rhode Island Reds.

Buy your Rhode Island Red Eggs for hatching from me, My Reds are imported from the United States and were winners at Sussex Halifax, Fredericton and Amherst Winter Fair in 1909, Prices on application.

Thomas S. Kyle,

Sussex Corner, New Brunswick

If you have Live Stock for sale advertise in the Maritime Farmer.

MARKETS.

St. John Prices.

Flour is lower and cornmeal higher. Hard wheat patents, $6.15 to $6.20; choice patents, $5.65 to $5.70; medium patents, $5.60 to $5.65; oatmeal, $5.00 to $5.05; cornmeal, $3.15.

Cheese, 13c to 13½c; butter, 22c to 24c; eggs, 16c to 17c.

This ought to be a prosperous year in New Brunswick. So far as farming is concerned the season is several weeks ahead of last year. The country never looked better at this season. Pasturage is good, and there is every prospect of a heavy hay crop. The general seeding operations are well advanced. A larger acreage than usual will be planted in potatoes, for which wider markets have been found. Fruits promise well. With regard to the lumber business, while it is costing more than usual to handle the long drives the short ones cost less, and the proportion of logs hung up will be much less than was predicted some three weeks ago. Surveyor General Grimmer estimates that fully 280,000,000 feet of logs were cut on crown lands last winter, and there was a large cut on private lands, as usual, so that the quantity of material available for the mills will keep them well supplied throughout the season. So far as general industries are concerned, they are active, and building operations will exceed those of last year. There is still considerable work to be done in railway construction, in the province. Hence the general outlook for business is good. It is an interesting sign of the times that many applications are made for license to search for minerals in various counties, and there is a prospect that the mineral resources of the province will attract increasing attention. The optimistic spirit which was voted early in tne year is very general in New Brunswick, and 1910 is confidently expected to prove a year of healthy expansion.

Halifax Prices.

Beans, $2.05 to $2.25.

Peas.—Round, $4.75 to $5.00; split, $5.50 to $5.75.

Oatmeal, Standard in bbls, $5.40 to $5.50; Oatmeal, standard in bags, $5.25 to $5.35; rolled oats, in bbls., $4.65 to $4.75; rolled oats in bags, $4.50 to $4.60; Middlings, $25.50 to $26.50; Bran, $22.00 to $23.00; Shorts, $24.50 to $25.50; Feed Flour, bags of 98 lbs., $1.65 to $1.70; Cornmeal in barrels, $3.20 to $3.30; Cornmeal in bags, $1.55 to $1.60; Feed Oats, bulk 45c to 46c; Feed Oats in bags, 48c to 49c; Hay, $12.00 to $15.00.

Pork.—American Clear Fat Backs, $32.00; P. E. I. Mess, $29.00; P. E. I. Short Cut Backs, $29.50; American Bean, $30.00; Rumps, none; Jowls, $15.00; Pigs Feet, $6.50; Hams, 18c to 19c; Roll Bacon, 17c; Side Bacon, 20c; Lard in pails, 18c; Lard in cases, 19c.

Beef.—American, $20.00; Best Canadian, $19.00; ½ Bbls. Pork and Beef, 50c extra.

Creamery Prints, 28c per lb.; Creamery Solids, 26c per lb.; Dairy Solids, 24c lb.; Dairy Rolls, 22c to 24c lb.; Cheese, twins, 13½c lb.; Cheese, large, 13c lb.; new laid Eggs, 18c per dozen.

Potatoes.—Nova Scotia, per bag, $1.25; New Brunswick, per bag, $1.25; P. E. Island, per bag, $1.25; Turnips, per bag (2½ bu), $1.00; Rhubarb, native per lb., .02c; Celery, per doz. bunches, $2.00; Tomatoes, per crate 30 lbs., $3.50; Lettuce, per doz. heads, 60c.; Asparagus, per doz. bunches, $3.00; Strawberries, per box 16c to 18c; Cucumbers, each .05c.

Fowl, per lb., 15c.; Turkey (fresh killed) per lb, 17c to 18c; Lamb, (cold storage) per lb, 12c to 14c; Spring Lamb, per carcass, $3.00 to $4.00; Ducks, per lb, 15c to 17c; Beef, per lb., 9½c to 10½c; Mutton, per lb., 6½c to 7c; Veal, per lb, 6½c to 7c; Pork, per lb, 10c to 11c.

Charlottetown Prices.

Grains.—Oats, 34c to 40c.

Feed Stuffs.—Retail; Bran, $1.20 to $1.25; Shorts, $1.30 to $1.40; Middlings, $1.35 to $1.45; Oil Cakes, $2.25; Corn Meal, $1.75 to $1.85.

Live Stock.—Butcher's Cattle, 5½c to 6c live weight; Milch Cows, $30.00 to $50.00; Sheep, 4½c to 5½c per lb.; Hogs, young pigs, $6.50 to $8.00 per pair.

Dressed Meats.—(Carcasses) 10c lb; Mutton (Carcass) 8c to 9c lb; Veal, 4½c to 5c; Pork, 10c to 11c lb.

Dairy Products.—Creamery Butter, solids, 24c; prints, 25c; Dairy Butter, 20c to 21c; Cheese, none sold yet.

Poultry and Poultry Products.—Eggs, 15½c to 16c; Fowl, 10c to 12c.

Vegetables.—Carrots, 30c to 40c; Potatoes, 23c to 25c; Turnips, 14c to 16c; Beets, none offering.

Miscellaneous.—Hay, $10.50 to $11.00; Straw, $5.50 to $6.50; Wool, 22c to 25c; Beef Hides, 9c to 9½c; Calf Skins, 12c; Sheep Skins, 75c to $1.25.

Remarks.—The spring seeding is about all completed, and with the rains we have had prospects were never better for a generous harvest at this season. The hay crop being excellent. Trade in farm produce is very dull. Potatoes are scarcely in demand at all, in fact red potatoes are not saleable, a limited quantity of blues are being worked off at about 23c to 25c to the farmers. Oats are also very quiet with very little offering and shippers simply holding on to what they have as the shipments are small. A fair sized cargo left by Black Diamond boat for Newfoundland this week, consisting of potatoes and oats with deck load of cattle. The butter market is easy and prices quoted are higher than most factories would be willing to accept for round lots. Eggs have been dropping from time to time and we think they are not yet to the bottom. Wool is in good demand. All pork buyers, except Doris & Fraser, have discontinued buying and they will close on the 10th. The Cheese Boards have not yet had their first meeting, it will be held about the 17th, when the first cheese of the season will be offered. Trade on the whole is quiet.

Western Farm Lands For Sale.

In sections, half sections and quarter sections of the best wheat lands in Sask. Wonderful terms to farmers wishing to occupy and work the lands. For particulars and terms write

Clair T. Elderkin.

The Western Real Estate man.

P. O Box 73. Amherst, N. S.

POTTS & CO.,

Commission Merchants.

Consignments of Small Fruits, Butter, Eggs, &c., solicited.

North Market St., IST. JOHN, N. B.

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwich, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N.B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

R. J. Messenger, Bridgetown, N. S.
John A. Hughes, Petitcodiac, N. B
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens. 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex N. B.
Syd. J. Goodliffe, Sussex, N. B.
Fred. S Black, Amherst, N. S.

Shorthorn Cattle.

C C H. Eaton, Canard. N. S.
Isaac Chipman & Son, Chipman's Corner, Kings Co., N. B.
Walter E. Eaton, Upper Canard, Kings Co., N.S

Oxford Down

Fred. S. Black, Amherst, N. S.

Cotswolds.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.

SWINE—Berkshire.

J. R. Semple, Brule, Col. Co., N. S.
Howard W. Corning, Cheggogin, Yarmouth Co. N. S.

Yorkshires.

J. R. Semple, Brule, N. S.
A. A. McBeath, Marshfield, P. E. I
The S. H. White Co, Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yar. Co., N. S.
Boyd A. Wetmore, Harvey, Albert Co. N. B.

Chester Whites.

W. H. Moore, Scotch Lake, N. B.
Howard W. Corning, Coeggogin, Yarmouth Co., N. S.
W. C. McLeod & Sons, Loch Lomond West, N. S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.
S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns.
W. J. M. McLeod, Loch Lomond, West N. S. Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

Maple Grove Ayrshires

I have for immediate sale several young Bulls fit for service, many of them prize winners at the recent exhibitions. Correspondence solicited. Prices reasonable.

M. H. Parlee, Lower Millstream, N. B.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone, Sussex, N. B.

For Sale.

Ayrshire Bull Calf "Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

JAMES BARRETT,
Hill Grove Farm,
Crouchville, St. John, N. B.

Chester Whites.

I am now booking orders for some choice Chester White Pigs, both sexes. Can furnish pairs not akin.
Correspondence solicited.

WM. ERB, - Sussex, N. B.

POULTRY FEED

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

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Humus---Its Importance in Maritime Agriculture

By Prof. M. Cumming.

An examination of almost any soil shows it to contain not only mineral particles derived from rock, but also plant and animal remains. The forest soil contains a large amount of partially decayed leaves and stems, usually called leaf mould. Cultivated land is filled with fine roots which have served their period of usefulness to the plant and are gradually being decomposed. Swamp areas contain large amounts of black vegetable matter, which when the soil is dry, will burn, leaving behind the much lighter colored mineral part. In fact, in all soils there is some material derived from the growth and partial decay of plants and animals. To this material we apply the general term, humus.

We may, therefore, define humus as the animal and vegetable matter of the soil in intermediate forms of decomposition; and we may premise the statement that humus constitutes the most important material which enters into normal soil.

QUANTITIES OF HUMUS IN SOILS.

In good soils of humid regions, such as the undepleated soils of the Maritime Provinces, humus is present to the extent of .75 to 2.50 p.c. In rich prairie soils the percentage of humus may be as high as 3.5 p.c., and sometimes even more. In soils which have been long cultivated, without proper regard to rotation and without the application of barnyard manure, the quantity of humus present may be reduced to such an extent as to make cultivation unprofitable.

SOURCES OF HUMUS.

As already stated, humus in the soil is derived from both plants and animals. Plants are the chief source. In our forest soils, leaves, twigs, ect., fall to the ground and gradually, through the action of bacteria, are reduced first to leaf mould and then to more advanced forms of decay. Early settlers will generally tell of the large crops produced on the virgin soils reclaimed from the forest and they will also tell how much less their crops were affected by summer droughts than at the present time. Some farmers who have followed a rotation of crops and have regularly applied barnyard manure, will tell that their soils are, at least, as productive and, in some cases, more so, than in the early days when they were first reclaimed from the forest. An examination of the soils, owned by these farmers will always show as big a percentage of humus as existed when the soils, were first plowed but a general examination of the soils especially in the Maritime Provinces reveals a much smaller percentage of humus than at first existed and the returns show proportionately small crops.

HUMUS THE KEYSTONE OF SOIL FERTILITY.

The theme of this discussion is to show that humus is the backbone and life of our soils. If all farmers of the Maritime Provinces farmed with a view to maintaining or increasing the humus in their soils, there would be no run out farms and no deserted homes. But if, on the other hand, our farmers persist, as many of them have, in those types of farming which reduces the humus of the soil, there is nothing in store but runout farms.

AN ILLUSTRATION.

In the state of Minnesota, two fields, side by side, containing originally the same amount of humus, were farmed on different lines for thirty-five years with the following results: Field No. 1, cultivared 35 years with a regular rotation of crops and application of manure, contained, at the conculsion, 3.32 p.c. humus and was very productive. Field No. 2, orginally the same, continuously grain cropped contained at the end of 35 years 1.80 p.c. humus and was at a very low state of productiveness. The illustration typifies processes which have been and are now going on in many farms, not only of the Maritime Provinces but of the whole Dominion of Canada. The conservation of our farming resources demands that the farmers of Canada must conserve and in some instances build up the humus of the soil. We shall later show how this can be done, but in the meantime, will have something more to say as to what constitutes the value ol humus.

CHEMICAL COMPOSITION OF HUMUS.

There is no definite composition of the humus of the soil. It is as variable as the material from which it is derived and the conditions under which it is formed. Since, for the most part, humus consists of vegetable remains, it naturally contains all the elements of plant food required for the growth of new plants, but it contains these in varying proportions. Humus for example, formed from a clover sod or from the manure from well fed stock is much richer in nitrogen (The most valuable element of the plant food) than humus from a timothy sod or oat stubble or from the manure from poorly fed stock; and humus from such a substance as sawdust is still poorer in nitrogen and is very much inferior in value to that from the first mentioned sources.

Humus contains organic acids, ments of the soil, such as lime, which unite with the mineral elemagnesia, phosphorus and potash. The term humates is applied to this combination. In the lertilizer factory, the manufacturer treats raw bone with an acid (sulphuric is the most satisfactory) and by this means renders the phosphoric acid soluble. In the same way the acids of humus will act upon the natural phosphate as contained in bone rock, etc., and render them soluble and so available for plant food. These vegetable acids also combine with various minerals in the soil and by doing so, set potash free from combination and make it available for plant food.

EFFECTS OF HUMUS.

Effects of humus on soil and there reby upon plant growth, are numerous and far reaching. They are of three sorts, (1) Physical, (2) Chemical and (3) Bacteriological.

(1) Physical: (a) It improves the tilth of the soil. Clay soils which are almost impossible of cultivation, become quite friable when sufficient humus is incorporated to lighten their texture and admit air. Sandy soils, which are otherwise too light and liable to be drifted by the wind or washed by rain, are bound together by the presence of humus and so improved in character.

(b). Through improving the structure of the soil, humus greatly increases its moisture holding capacity. Pure humus will absorb from 200 to 300 percent of its dry weight of water, as compared with 10 to 15 p.c., for sandy loam and 25 to 35 p.c., for clay loam. It, therefore acts as a sort of reservoir for water and enables soils to resist droughts. Those whose fields are rich in humus know how much better plants grow in these soils during a time of drought than in adjoining soils, which have become depleted of their humus.

(c) Humus imparts to soils a dark color and since dark colored objects always absorb more heat than light colored objects, it is easy to understand the fact that soils rich in humus may have a temperature of as much as 8 or even 10 degrees higher during sunshine than soils devoid of humus. Seeds therefore, have a chance to sprout and young plants to grow more quickly in humus rich than in humus poor soils.

(2) Chemical. (a) Since humus consists of the remains of former plant or animal life, it naturally follows that it contains all the elements necessary for the growth of future plants. It is, therefore, a direct source of food elements. Farmers have no doubt observed that bone meal and other fertilizers will give better account of themselves in soils rich in humus and that they give very indefferent returns on soils free from humus.

(b) As already explained, humus contains organic acids, which act upon the inert mineral elements of soils and render the plant food contained in them available for plants.

(3) Bacteriological.—(a) The presence of humus in soils leads to an increased number of soil bacteria and it is almost an invariable rule that the more numerous the bacteria, the more fertile the soil. In soils poor in humus we have found scarcely more than a few thousand in an ounce; whereas in soils rich in humus we have found as many as 400,000,000 to 600,000,000 per ounce.

We have now briefly shown the nature and importance of humus and, therefore, come to the most essential part of this paper viz., how to maintain or increase its supply.

HOW TO MAINTAIN OR INCREASE THE SUPPLY OF HUMUS.

There are three methods which are resorted to a greater or less extent in order to accomplish this desired end; (1) The feeding of all produce raised on the farm to stock and the application of barnyard manure to the soil. (2). The plowing under of crop residues, especially clover. (3). The plowing under of green crops. The most important of these, and that which must receive greater attention in the Maritime Provinces is the first. With this I dealt pretty fully in my last address before this body and I will therefore refer to only a few additional particulars which were not then discussed. These relate to the preservation and care of barnyard manure.

If barnyard manure is not carefully preserved, it is possible even in the course of a very few months, to allow 50 p'c. of its humus and approportionate amount of its nitrogen to pass off in gases into the air. The ideal way to get the most humus and plant food from barnyard manure into the soil is to apply to this land as quickly as possible after it is made. If, however, owing to fear of surface washing or through not having land in shape to apply it, barnyard manure must be kept either in the yard or in heaps in the field, particular attention must be paid to preventing leaching and heating. Both of these may

prove serious sources of loss, but of the two, it has been our experience that fermentation is by all odds the most troublesome. To prevent this, manure must be kept as compact as possible, so as to prevent the free circulation of air which is essential to the early stages of fermentation.

(2) The Plowing under of Crop Residues. The residues from such crops as oats, roots, etc., are very small, as compared with the residues from a good clover growth, or even from a good grass growth. If therefore, one persists in the growing of either roots or grain he will quickly deplete his soil of humus. So also leaving land to hay for a great many years without plowing will lead to a depletion of humus. But if a regular rotation of crops is followed and particular reliance placed upon clover, the supply of humus can be very fairly maintained. If with this barnyard manure is regularly applied, there need be no loss but rather a gain in humus.

In our experience, a rotation which has led to the satisfaction.
has led to the satisfactory maintenance of the humus supply is a four year rotation, consisting of one year hoed crops, one year grain, and two years in hay. In seeding down our hay, we would always use a larger proportion of clover than of timothy seed. Sometimes we have extended this into a five year rotation by putting in a crop of oats in the year succeeding the second crop of hay. When this done we do not hesitate, even if the intention is to get the land ready for roots the following year, to sow at least, from 6 to 10 pounds of clover, the growth of which plowed under in the fall will serve to, at least, maintain and, in good seasons, will slightly increase the amount of humus. To some this may appear a wasteful practice, but they will observe that by following other practices their fields have become less productive, due to the fact that the growing of the grain crop without seeding down the land will quickly deplete the store of humus. In cases where it was sought to build up the farm quickly, we have often known the owners to resort to a three year rotation, consisting of a hoed crop, followed by grain seeded down most to clover, thus producing a clover crop for the third year, the after math of which is plowed under in the fall. In general farming, however, where the soil is in fairly good condition, this short rotation necessitates more labor than is ordinarily available. Perhaps the majority of Maritime Province farmers would leave their land down to hay for three or four and sometimes more years. Those who do so must recognize that such a practice reduces the store of humus and gradually leads, to the system of run-out farms which is altogether too prevalent in our provinces today. However it is decided to work it out, we cannot too strongly recommend the practice of plowing under a clover sod as frequently as possible.

(3) The Plowing Under of Green Crops. This we may regard as a heroic measure. Nearly all orchardists practice it, but under a system of general farming, provided a farm is in good shape, we would seldom resort to this. If field is run out, which almost always means that it contains too small a supply of humus; then humus must be added to it. If barnyard manure is available, an application of it will accomplish the result. But if barnyard manure is not available, then humus must be added by plowing under a green crop. For this purpose, two classes of crop may be used. (1). Non-leguminous crops, like buckwheat or rye, which when plowed under add vegetable matter but do not add to the store of nitrogen; and (2) Leguminous crops, such as the clovers, peas, vetches, which when plowed under not only add humus, but also nitrogen. Actual records kept show that by plowing under one of these leguminous crops an increase, of nitrogen has been effected to the extent of from 50 to 200 pounds per acre, which at commercial rates would be worth $7.50 to $30.00 per acre. Wherever they will grow at all satisfactorily leguminous crops should be used. However, it often transpires that it is desirable to increase the humus of a field which is too poor to yield a good growth of any of these leguminous crops. Under these circumstances resort must be had to plants belonging to Class (1). In the spring of 1908 we sowed buckwheat on a field, which from previous experience with adjoining lands, we knew would not produce a paying crop of oats or hay and which we also knew would not grow a sufficiently luxuriant leguminous crop to be worth while. In orper to give the buckwheat a little chance we sowed on part of the land a very slight application of commercial fertilizer and on the remaining part a small quantity of barnyard manure (5 or 6 loads to the acre, being the scrapings of the barnyard.) By this means we grew a fairly good crop of buckwheat, which we plowed under when in full bloom in the month of August. We immediately harrowed this land and got it into shape by the first week in September for Fall Rye. This produced a splendid crop in the following June. We plowed this under and then sowed the land again to buckwheat and secured a splendid crop of buckwheat grain. We sowed a little clover with this which came on very well after the buckwheat was cut, and consider that the land is now in good enough shape to sow to grain and seed down in the ordinary way. Those people in the Maritime Provinces who have run-out fields from which they are now getting no returns but which they wish to bring in as cheaply as possible, will find some such things as this a good means to resort to.

COMMERCIAL FERTILIZERS AND HUMUS.

During the past few years such commercial fertilizers as Bone Meal, Basic Slag and various mixed grades of fertilizers, also such amendments as lime, gypsum, mussel mud, etc, have been extensively used to cause run-out fields to come back to their former productiveness. Oft times the first and sometimes the second application of these have given splendid crops of grain, but latter applications have usually proven very disappointing. We will first consider the application of lime, gypsum and mussel mud. All of these are valuable because of the calcium which is the active principle which they contain. All lead to the quick decomposition of humus. Everyone knows that if you add lime to a refuse heap or a compost you will hasten its decay. The same is true when lime in any form is added to the soil. Probably all are familiar with the old saying that "lime enriches the father but impovrishes the son," and probably many have already learned that whilae mussel mud or pure lime or gypsdm may give good returns at first, yet they will ultimately yield very poor returns. The reason is that lime in any form will quickly impoverish land of humus and unless an effort is made either by applying barnyard manure or frequently plowing under clover sods or green crops, to keep up the store of humus, the land will quickly become unproductive.

Such fertilizers as Bone Meal, Basis Slag and the various mixed fertilizers differ from lime, mussel mud, etc., in that they contain large quantities of the essenlial elements of plant food, viz;, nittogen, phosphoric acid and potash. From this standpoint they are not as exhaustive of the soil as lime, etc. However, these do not contain humus and unless properly used, they will not add humus to the soil. We have known of farmers applying bone meal, for instance, to low producing fields and to have harvested from this application a large crop of oats, etc., but when the practice has been followed up we have observed very much poorer results. The reason for this is that the owners have not paid attention to maintaining a supply of humus. All these fertilizers differ from barnyard manure in that they do not contain humus, whereas barnyard manure does. If they are to be used judiciously with a view to keeping up the fertility of our lands, their use must be accompanied by the frequent plowing under of clover sods and, in extreme circumstances, by the plowing under of green crops.

There is another side to this fertilizer question, which is that, one will always get bigger returns for the money invested in them if he sees to the maintenance of the humsupply supply of the soil; whereas, if he loses sight of this he will not get back in his crops even enough money to pay for the commercial fertilizer he may buy.

The western plains are more fertile than the east, because for generasions the grasses which have grown on these plains have been allowed to die and remain where they grow. This accumulation of vegetable remains had been going on for many years. At the present time, the majority of our western farmers are recklessly reducing this supply of stored-up humus, and have, in some cases, already reduced to such an extent as to make wheat farming unprofitable. Their methods have been aptly termed as "surface mining." If continued in, these exhaustive methods will lead to such a depletion of the stored up humus as to make farming in these regions quit? as difficult as in the most run-out of these. It is to be hoped, however, that the farmers of the west will learn the lessons of the east and will conserve the stored up humus which makes their soils so fertile. And we of the east can only hope that all of our farms will adopt the practices of aur best farmers and will feed more stock and produce more manure and grow more clover, following shorter rotations and so build up the supply of humus on our farm lands. When this is done, there will be no more run-out fields, no more deserted homes and prosperity will be in evidence everywhere. The road is not an easy one, but many of our farmers have already travelled it and have achieved success. It remains for all to recognize these underlying principles which are in the very nature of things and which, when studied, and made the rule of their practice, will lead to success just as surely as any line which they may follow.—An address by Prof. M. Cummings at the recent Provincial Seed Fair, Summerside, P. E. Island.

Practical Results of Underdranage.

Some years ago the Department of Physics at the Ontario Agricultural College began teaching the subject of drainage. This led to a study of drainage conditions throughout the Province. It was found that thousands of farms, amounting to millions of acres, were so wet as to produce only about one-quarter to half a crop, while others, once wet and almost useless, had been transformed by underdrainage into the most productive in the land. These observations led us to begin a movement for the spread of information regarding tile drainage, by sending drainage advisers to any farmer in the Province who might apply for assistance, to survey his land for drainage purposes, determine the best system of drains to adopt, the grades of drains, sizes of tile, etc. The idea proved popular, for during 1906, 1907 and 1908 several hundred farmers applied for and received assistance in this way. In the spring of 1909 the Department wrote a large number of them, asking if they had put in any of the drains laid out for them, and if so, to give their experience, paying special attention to cost of drains, difference in dates of seeding, difference in growing crop and increase in yield. A few others, for whom no surveys had been made, but who had done draining in previous years, were also written to.

WHAT PEOPLE SAY ABOUT UNDERDRAINAGE.

The reports showed even greater results from drainage than we had anticipated, and in submitting a paper on the practical side of this subject, perhaps I cannot do better than present quotations from a number of the letters received.

QUOTATIONS FROM REPORTS BY MEN WHO HAVE DRAINED.

William Bell, Washago, Simcoe.—"I drained eight acres you surveyed for me in 1907. It had produced nothing previously. Last year I grew a fairly-good crop, of oats on it, which yielded, thirty-three bushels per acre. Following is a statement of outlay and results:

Cost of draining eight acres, $290.90, or $35.11 per acre, including a six-inch main to drain other land as well as this.

Returns—Thirty-three bushels, oats at 45 cents, $118.80, nearly half cost of drainage, and straw yet to be accounted."

J. H. Clare, Chapman, Hastings.—"Fields that previously were unfit for crops at all, can now be seeded on even date with high land, and, while before, they grew nothing but course grass, now they yield per acre:

Hay .... 2 to 3 tons
Barley ....30 to 50 bushels
Oats .... 40 to 100 bushels
Corn .... 14 feet high

James Clayton, Cedar Springs, Kent.—"In 1901 I drained eight acres, at a cost of $112, or $14 per acre. Eight acres right across the fence were not drained. In 1902 both fields were sowed to beans.

8 acres drained land gave 302 bushels, which sold for $456
8 acres undrained land gave 24 bushels. which sold for 37

Gain $419

Nearly four times the cost of drainage."

Author's note.—This example shows the value of underdrainage in specialized agriculture.

"In 1903 both fields grew fall wheat.

8 acres drained land gave 45 bushels per acre.

8 acres undrained land gave 25 bushels per acre.

Gain—Twenty bushels of wheat per acre.

1904—There was drained land on both sides of that fence."

George J. Coad, Oakwood, Victoria.—"I drained a piece of land last fall.

Before draining it would grow only a water weed.

Now, July 1st, it has grain on it as good as anywhere else on the farm, twenty-one inches high, as you will see by the sample I am sending, but the water weeds are too small to send a sample of."

W. J. Cohoe, New Durham, Brant.—"About two-thirds of the oat field was drained last fall, and this went in in good condition, April 30th. The rest of the field is porous soil, but

rather level and higher than the drained part, and we sowed it three weeks later, and I must say it was not really fit then; but anxious to get it sown, we 'mudded it in.' "

Nathan Day, Powles Corners, Victoria.—"I drained a ten-acre field some fifteen years ago, at a total cost of $145. or $14.50 an acre, the drains being four rods apart, and two and a half feet deep. It was a muck soil, from a foot to a foot and a half deep, underlaid with a heavy clay. Before draining, it was the wettest field on the farm, and would grow only hay and oats, and never more than a half crop of them, and was never sowed before June. Since draining, is is second driest field we have, and will grow a full crop of anything that can be grown on the high land of the farm. It has been sowed in April every year but one since it was drained. The drains paid for themselves in two years. If I were draining this field again I would put a drain every two rods, for the crops are always better right over the drains than half way between."

F. W. Huntley, Sutton West, York.—"We drained part of the land surveyed, and this year a fine crop of fall wheat is growing on land that formerly was counted too wet for anything but meadow."

Joseph Lamb, Brantford, Brant:—"I think underdraining the best investment I can make on my farm."

William Lapp, Cedar Grove, York.—"I drained five acres with drains one hundred and twenty feet apart, (one hundred and ten rods, or five acres).

Drained another field with drains thirty feet apart, and three feet deep. In each case the gain in the first crop paid the full cost of the drainage.

My general conclusion is this. Where drainage is at all required, its entire cost will be repaid by the increase in the first two crops, but in most cases by the increase in the first crop alone. Our own experience is the latter."

A Leach, Farm Manager for W. F. McLean, M. P., Donlands, York.—"The cedar swamp field south of the barn, which you surveyed, and which you will remember, was so wet, even in the dryest part of the summer, that one could not walk on it without getting wet, was drained last fall, and this year, in spite of the heavy rains which delayed all spring farming operations, it was the dryest field we had when we came to cultivate it, although much of our land is high and rolling. The crop sowed on it is coming on fine, and gives every indication of good, stiff, strong growth."

James Marshall, Hamilton, Wentworth.—"In fifteen years I have put in over twenty miles of drains on my farm, and my only regret is that I have not used more of the time God has given me to complete the underdraining and bring the whole farm into a better state of cultivation. In 1897 I drained a twelve-acre field at a cost of $460, almost $40 an acre, drains being twenty-five to thirty feet apart, and three feet deep. The next year this field yielded eighty bushels of oats per acre, while the adjoining field, of similar soil, but not drained, yielded only forty-five bushels per acre, thus gaining thirty-five bushels of oats per acre by drainage."

Author's note.—Price of oats by to-day's paper, forty-four cents. Value of thirty-five bushels at .44-$15,40, considerable more than one-third price of drainage, and the increase of straw yet to be counted.

"Another year I got the following results '

45 bushels wheat on drained.
25 bushels wheat on undrained.
Thus gaining twenty bushels."

Author's note.—Wheat to-day, price $1. Value of twenty bushels, $20. Over half cost of drainage, and straw, yet to be accounted.

R. H. McCurdy, Vienna, Elgin.—"Last fall I drained two acres that formerly would grow nothing. They were low spots in a field. Cost, $17.50 an acre. This year I had thirty bushels of fall wheat per acre on them, while the higher land gave only fifteen bushels. The drains more than paid for themselves with this one crop. The whole thirty bushels was gain, as these spots would grow nothing before."

Author's note.—Value of thirty bushels at to-day's market price, $30.

John McIntaggert, Brechin, Ontario.—"Last fall I drained the lowest of the land you surveyed, putting in over five hundred rods of tile drains. Other years I was unable to work on it till the last of seeding, but this year it was the first ground I could work on, and was all of a month ahead of high land."

Author's note.—With regard to Mr. McIntaggert's case, a very interesting fact came to my notice recently. His drains, about five miles, on fifty acres, were laid out by the Department in June, 1908, and at the conclusion of the survey a drainage demonstration was held at which many of the neighbors were present, one of whom applied for a survey of his farm, but it could not be undertaken then, and was later turned over to Mr. J. H. Hare district representative of the Department of Agriculture at Whitby Collegiate Institute. In June of the present year Mr. Hare went to the locality to make the said survey and in the meantime Mr. McIntaggert had put in two and a half miles of drain on about twenty-five acres, and the neighbors had been watching results. What they thought may be judged from the fact that Mr. Hare had to make nine surveys instead of one before leaving the community.

J. P. McKim, Caledon, Peel.—"I have drained some muck holes, which were always so wet, that we had to sow around them, even in a dry spring. This year, they were the first of the field ready to sow. I cannot compare dates as I never could sow them before."

John A. McMahen, Petrolea, Lambton.—"This year, 1909, I had barley sowed on drained, and on undrained land. The drained land yielded fifteen bushels more per acre than the undrained, and twice as much straw."

Peter W. Scott, Belgrave, Huron.—"The lowest field on my farm, has drains one hundred feet apart, and this spring it was the driest field, and ready to cultivate the earliest. I consider in a year like this thorough drainage, doubles the value of land for cultivation."

Smart Bros., Collingwood, Simcoe.—"We put down some seventeen thousand feet of tile drains last fall, according to your survey, and everything worked out perfectly. The cost was $973. The greater part of the land drained, had never been cropped before on account of being too wet, but this year, we have tomatoes planted on some of the lowest of it, also carrots, beets, and parsnips, etc. We would not think of working undrained land in our business. We cannot say to much in praise of the drainage work of your Department, as we have done considerable tile drainage before, and therefore know the advantage of your system."

Only one report was received of ununsatisfactory drains. One gentleman said: "The drains I put in did not give me satisfaction. The most trouble I had with the land was that it dried out before I could get to plow it, or, in fact before the other ground was ready, and got hard." The reader will appreciate this at its full value.—Prof. W.H. Day

Maritime Agricultural Prospects.

The farmers of Upper Sackville are jubilant over the prospects for a heavy crop of hay on their marshes. Where the marshes are well drained and properly seeded the growth is all that could be desired and stands out as an object lesson to those who neglect their marsh lots. The growth on the undrained areas is rather sparse. In years gone by timothy hay took precedence in our markets, but now that farmers are beginning to realize the value of clover growing as a valuable asset in maintaining soil fertility and as the demand for clover hay is increasing for stock feeding purposes, the farmers are sowing greater quantities of clover seed every year. The present prospects are that haying will start this year very early in July, as some fields are now showing signs of lodging.

Some of the farmers in the vicinity of Amherst complain of a rather sparse growth on the marshes. Owing to a break in the dykes last fall the tide damaged fields that had been put in excellent condition for heavy crops of clover.

There is still a great quantity of last year's hay in stacks and barns on the marshes. The hay presses are working and the old crop is being gradually shipped but the prospects are that quite a large quantity of last year's crop will not move out before next fall as the demand, last winter, was not exceedingly heavy and not a few farmers held their crop for higher prices. Others who refused a fair price last fall were glad to dispose of some of their crop this spring at lower figures.

A visitor to the Experimental Farm, at Nappan, N. S., will be well repaid for his visit. The weather has been rather unfavorable in that vicinity for those who do work on an extensive scale and has caused the work to drag longer than Mr. Robertson, the genial manager of the farm would like. The crops that got an early start are in excellent condition. Turnips sown on June 11th could be plainly seen in the rows on June 17th. The orchard is in a particularly thrifty condition and the cover crop of Crimson Clover is now being plowed under. The clover is in full blossom and fully three feet high. The reader can imagine the large quantity of humus that this crop will form in the soil. Nearly a carload of steers are being finished for the midsummer markets. Mr. Donaldson who has charge of the apairy on the Experimental Farm has had very good luck with his bees this spring. Some of his colonies have quite a surplus of comb honey and in the course of a day or two the extractors will be started.

The acreage devoted to turnip growing is very much increased this year in all parts of the Maritime Provinces and is one of the sure indications that farmers are beginning to pay more attention to the feeding of their live stock for profits. The sowing of green crops for soiling purposes is also rapidly gaining in favor.

In the vicinity of Sussex, the farmers are taking a great interest in Alfalfa growing, spurred on by the successes obtained by some of their number who have given this valuable plant a square deal. Mr. Wm. McLeod, Sussex, has quite a large plot from which he has been soiling his cows for over a month. Those who succeeded in getting a proper inoculation of the Alfalfa seed have no trouble in getting it to grow and some of their plots are now from two to four years old. Instead of using commercial nitro culture this year, Mr. C. W. McDougall, Dairy Superintendent, who has been largely instrumental in arousing a healthy interest in Alfalfa growing, is distributing to all those wish to start small plots, small quantities of inoculated soil from his own plot which is fairly teeming with bacteria bearing nodules. The Sussex and Studholm Agricultural Society has placed the sum of fifty dollars at Mr. McDougall's disposal for the purpose of awarding prizes for the best plots of Alfalfa in the vicinity of Sussex during the seasons of 1910 and 1911.

They have also forwarded a memorial to the New Brunswick Department of Agriculture asking that something be done re awarding future prizes in Alfalfa growing in New Brunswick in the year 1915 along the same lines as is now being organized in the Province of Saskatchewan.

The field meetings held under the auspices of the New Brunswick Department of Agriculture are proving both popular and instructive.

In Nova Scotia excursions to the Agricultural College at Truro are rapidly gaining in favor and each and every visitor derives a lot of benefit from seeing how the work of crop growing is conducted. Prince Edward Island and New Brunswick farmers would profit by visiting the College Farm. We know the college staff would give them a hearty welcome.

Underdrainage is receiving a great deal of deserved attention now-a-days and the farmers are all interested in the work that is being done by the traction ditcher recently purchased by Prof. Cumming.

How to Cure Clover Hay.

Haying will soon be on, and farmers will be busily engaged in harvesting this most important crop, says C. A. Westover, of Mississquoi Co., Que. As hay forms such a large part of the winter rations for our live stock, we ought to be careful to save it so as to get the very best quality. With us timothy forms the greater part of the crop, with a small acreage of clover, and both are cut before they are ripe, if the best quality of hay is to be secured. Late-cut hay may give a larger yield in pounds per acre, but it will not be so digestible as that which is cut early. Clover is generally cut when about one-third of the crop is in bloom, as at that stage of maturity it is still tender and nutritious, and a good aftergrowth is secured to supplement the pastures where they get short in the fall.

Timothy is cut after it is headed out and flowered.

When the clover has arrived at the right stage of maturity, we begin to cut in the morning as soon as the dew is off, and cut as much as we can get into cocks before the dew falls at night. After it has wilted in the swath for a couple of hours the tedder is put on, and about the middle of the afternoon, it is raked into winrows with an ordinary eight-foot dump rake and made into small cocks containing about three forkfuls. It is allowed to stand for about two days, and the cocks are then opened for an hour or so if it is very green inside, and after opening it is hauled to the barn in good sized loads.

Clover cued in this way comes out of the mow green and palatable, with most of the leaves intact, and they are the richest part of the hay. Timothy does not need to stand quite so long in the cock, as a rule, but otherwise it is treated about the same as clover. Hay cured in this way makes more work than when it is left to ripen before cutting, so it can be cut and drawn the same day, but the difference in feeding value is greater than the difference in cost of production.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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COUNTRY VS. CITY LIFE.

With the bettering of the conditions existing on farms it ought to be impressed upon our youths, both boys and girls, that farm life, with all its outdoor joyousness and freedom, offers more in real living to the man and woman than does the city. If this were believed in the "teens" of a person's existance, fewer men would drift into the mediocre life of the average city inhabitant. The scorn that a jolly, independent, country-loving resident feels for the "tether-tied" existance of the average city man is born of the "right of his eminent domain" that fairly pulsates through his vigorous rustic frame. Too few of our farmers instil into the young the love of nature and the glories of an open-air existance. Too often the troubles and worries, self-imagined, are allowed to obtrude upon the generally optimistic lives of our young people. When we find in a large city that the great majority of the people are living from "hand to mouth" we must stop and enquire after all, do they get the worth of their whistle? To have a detached eight or ten roomed house like many farmers enjoy the city man must pay a rental or tax of many hundreds of dollars. We will place it at $600 a per year. The generous supply that flourishes at our country festive boards would cost the townsman another $200 extra per year. Useless attractions, excursions, and sight-seeing over and above the necessar needs of such, run away with many more dollars. Thus the farmer is assured in residence, food, health, and independence almost $900 of a start per year above his city friend. What money the salaried men gets, exceeding this amount, is used for clothing, education, church, etc. In the end his bank account is not swelled very much more than the provident farmer's. It may be objected that the life is too monotonous on the farm and the chances of learning and of education are so poor that a less spacious life in the city is preferable. This has been a vailed reason too often heretofore. But earnestness and persistance in agricultural legislation and education are giving the farmers improved machinery, telephone communication, daily papers, electric railways to the large centers, rural mail delivery, and houses equipped with all conveniencies. He then becomes the most envied of men. His life is a busy one, but one of cheer, health and business integrity. Such is no dream of a Utopian, but a life that every farm boy can aspire and attain, if he will buckle on an optimistic determination to make the old farm a modern paying and educating enterprise. There is room in ahe Maritime Provinces for the grandest of lives on our splendid situated farms, and we trust we will hear of less numbers of our good young men leaving these choice fields for speculative allurements of a shut in city life, or the blandishments of a newer civilization.

HOW TO PRODUCE GOOD ANIMALS.

Good animals are produced by good feed, good care and plenty of it. The farm where good stock is kept must be well kept. It will not do to abuse the farm by eating out the pastures and impoverishing the land. Good, well-kept farms and good stock very natuaally go together. A big, rank growth of grasses where the animals wade around in the pastures is much more conductive to thrift and growth than where they are obliged to spend all day and part of the night in search of enough feed to partially satisfy their appetites. The constant hunting and anxiety of the animal, the nibbling process that must be energetically kept up in order to sustain life is a waste of energy and waste of flesh. It puts the animal on a system of decline rather than one of vigorous development.

One of the very common mistakes made on many stock farms is overstocking, trying to keep more animals than can be profitably and properly kept. This is not a difficult thing to detect. Any observing feeder or breeder should be able to pick out these places as he drives through the country. It is not necessary even to see the animals. The pastures show it first. Hog lots and cattle lots and yards are very naturally supposed to be bare ; they are not intended to produce a living for the animals kept on the farm. They are merely conveniencies for yarding where the apportioning out of prepared feeds designed for the animals is usually done. But the pastures adjoining these yards are supposed to contain an abundance of good, succulent feed for the growth and development of the stock.

In the production of good stock good feed conditions must first be provided. This means good farming, and good farming is at the basis of every successful farm industry or enterprise. The feed supply must not only provide for the grazing season, but for all seasons. The winter season or prepared feed season is the most critical period in the growth of the animal, because the natural conditions of vegetation must be supplied as far as practicable by the storage and preservation of succulent feeds for winter use.

A NOVEL MARKETING SCHEME.

On another page of this issue will be found an article entitled "A Novel Marketing Scheme" which we reproduce from an Orange Judd Farmer clipping recently sent us by Mr. R. J. Messenger, Bridgetown, N. S:

We have on several occasions referred to the co-operative spirit that should exist between the country merchants and the farmers of their respective districts. It is not an uncommon complaint among country merchants that the various households in their vicinity are ordering nearly all their staple and fancy goods—everything from mail order houses and that as a consequence their trade is very much injured. Merchant's Associations are constantly clamoring for a certain amount of redress in this line by asking for certain semi-prohibitory rules and fees. We are personally acquainted with some members of mercantile associations, who are always loudly denouncing the residents of rural communities who patronize mail order houses. When a farmers' meeting is held in their locality they seem to give their noses an upward turn and say "we are not interested in farming" and make themselves conspicuous by their absence from such meetings, whereas they should be on hand to help along the cause of advancement along lines pertaining to Agriculture in their respective districts. It would be well for our readers to draw the attention of their merchants to the article referred to and who knows but that they may glean an idea from the action of their Geneseos friends that will redound to the mutual benefit of all concerned.

ECONOMY IN PRODUCTION.

It is not enough to produce a crop on the farm, but it must be produced under strict methods of economy. This means the greatest possible yield for the least possible cost. The handling of the farm means much more now than when lands were low-priced. There is a greater demand in getting a profitable yield of the crop produced. The best paying market crops are studied more carefully now as to demand and to probable yield. The question of soil fertility is also taken into account in the planning of the crops to be produced.

The idea that crops can be produced from lands and still increase the producing power of the land is being taken up in view of soil improvement where deterioration exists. Soil improvement is where the land owner looks to the land for part of his profit in farming instead of expecting it all to come from the crops produced. Feeding the soil by crop rotation and crop fertilization is in the line of economy in production.

Economy in production may also be practised in the selection of crops that are in greatest demand in the markets of the country. The profitable crop, the easily marketed crop, the crop that offers strong resistance to perishable influences, the crop that has an every-day demand, should be studied in view of its adoption into the list to be used.

INVESTIGATING P. E. I. CHEESE TROUBLES.

Receivers of Prince Edward Island cheese in Great Britain have made some complaint to the Dairy and Cold Storage Commissioner, Mr. J. A. Ruddick, respecting the heated condition of several shipments via Halifax during the season of 1909.

With a view of finding the weak spots in the transportation between the factories in the Island and the docks in Great Britain, the Commissioner is arranging to assign an officer to the duty of watching the shipments from the Island during the present season. The cheese will be followed at every shipment during the hot weather from the factories to the wharf at Halifax and accurate records of temperature and other conditions will be noted at every point. Recording thermometers will be used in the cars and on the ferry steamer, and these instruments will also be placed with the cheese in the holds of the steamships before they leave Halifax.

This defect of "heated flavor" which at one time threatened the supremacy of the Canadian cheese trade. has been practicelly eliminated from Montreal shipments since the inauguration of the system of cargo inspection, which is maintained at that port and at ports in Great Britain under the direction of Mr. Ruddick.

As Mr. Ruddick points out, it is necessary to find out where the trouble arises, before remedy can be intelligently applied.

EDITORIAL NOTES

Here is something from the pen of one of our leading educators well worth considering: "Were manual training of a a practical sort provided for all the grades, and were the arithmetic, the language and the drawing brought into closer relations with it ; were nature study and school and home garden work made more general—the passage from the grammar school to the high school would not be less easy, but the passage from the school to the shop and the farm would be easier."

Conservation of Soil Moisture.

The conservation of soil moisture is an interesting and necessary subject for discussion.

The great problem in crop production, is how to supply moisture in adequate quantity, and at the right time to the growing crop. Where there are no irrigation projects upon which one can depend for soil moisture in time of drought, he must therefore turn to the regulation and conservation of the natural precipitation.

If a man works his soil in such a way that it is in the best possible condition to receive and hold a limited raibfall, he not only has largely solved the problem of moisture, but even the problem of maintenance of fertility. It is the question of how to increase the water holding capacity of the soil that will be touched upon.

Under drainage is the most efficient means of improving a soil in which the water table is so close to the surface that the soil is too wet for farm crops. Deep plowing, harrowing cultivating and other tillage operations also do much to deepen the soil, and during dry weather to increase its water holding capacity. The more a soil is pulverized, and the greater depth to which it is loosened, the more water it will hold and further, the loosening of the surface of soils, gives the water freer opportunity to soak into the soil, and thus moisten the land to as great a depth as possible. Fall plowing will leave the soil loose so that it will absorb the winter rains. If the surface is left hard and compact much of the water will run off and thus be lost. The fall plowing with subsoiling will loosen the soil from four to fifteen inches and this enables it ti retain a majority of the water that falls upon it as rain or snow. This is especially true of heavy clay soils.

The addition of humus to the soil in the form of farm manure, muck or a green manure has a very marked influence on its ability to hold water. This can be plainly shown by a table from "Hilgard's Soils" in which he gives the water holding capacity of soils. The table is as follows :

Sharp sand holds ...25 p.c. of water
Clay soil holds ...40 p.c. of water
Heavy clay holds ...61 p.c. of water
Loam holds ....57 p.c. of water
Garden loam holds ...89 p.c. of water
Humus holds ... ... 181 p.c. of water

Thus it can be seen that humus holds approximately twice as much moisture as garden loam, three times that of heavy clay loam and seven times that of sand. How would not a little of this then, added to the soil, increase its capacity to hold water.

It is, however, not necessary to know how to accumulate water in the soil, but also how to retain it or prevent its loss. We often hear of the film-water amounting to from one to one and one half inches, being lost by evaporation. This can be almost wholly prevented by using mulches.

The most effective and practicable mulches are coarse hay, straw and farm manures, not only because they are easy to apply, but because of the humus which they add to the soil. The most practical mulch in growing farm crops is the soil itself. This is obtained by stirring the surface of the soil with implements such as the harrow and cultivator. Stirring the soil spreads the soil grains so far apart that water cannot pass from one grain to another except very slowly, and the moisture cannot rise any further than the compact, firm soil which now is not on the surface but several inches below it.

These things have, however, to be studied and practiced, not after the drought has come but rather as security measure before it arrives.

Potato Blight.

THE KINDS OF BLIGHT.

There are in this country two diseases of potatoes which commonly go under the name of "potato blight". One is known as "early blight" (Alternaria solani) and the other as "late blight" (phytophthora infestand).

The ideal conditions for the development of this disease are damp, muggy weather, with a temperature of about 70 degrees.

The late blight seldom makes its appearance in the Maritime Provinces before the first of August, and may appear at any time from then on to the end of the season. When the weather conditions are favorable, it is very rapid in development and very destructive.

A healthy looking potato field may be destroyed under its attack in the course of only a few days. It begins near the ground and rapidly works upward on the plant. Fields affected emit a peculiar, characteristic odor.

EARLY BLIGHT.

Early blight does not require as favorable conditions for its development as are necessary for late blight. It is a disease which may begin to affect the plants early in June or any time thereafter. It is usually most destructive in July and August The desease appears as brownish spots on the leaves. It usually attacks the ends of the leaves, where the moisture evaporates last, more than it does the other parts of the leaf surface. It is much slower in action than late blight. Weak plants suffer more from its attacks than vigorous ones. The injury it does is undoubtedly greater on late varities and on late plantings of early varieties than it is on early plantings of late varieties. The latter are often nearly mature by the time this desease becomes serious.

SPRAYING FOR EARLY BLIGHT ON EARLY PLANTINGS OF EARLY VARITIES.

The indications are that it will not pay to spray with Bordeaux mixture on early plantings of early varieties, but this has not yet been definite proven. Wherever it is to be done, it must begin when the plants are small—about eight inches high, and continue about every ten days, until about ten per cent. of the leaf surface is affected with disease, after which it is not likely to be any longer sufficiently effective to be worth while. In very rainy weather, the applications should be sufficiently more frequent to keep the leaf surface well covered with a coating of the Bordeaux mixture. When the spraying is begun while the plants are small, an application of twenty-five to thirty-five gallons of Bordeaux mixture per acre will usually be sufficient the first time. The second time the application should be increased to about fifty gallons per acre, and the third and subsequent apulications should be at the rate of sixty to seventy-five gallons per acre. Thorough spraying under a pressure of about seventy-five pounds, from a nozzle of the Vermorel type, is essential to success. One nozzle per row is sufficient for the first application, after which two nozzles per row will be needed.

SPRAYING FPR EARLY BLIGHT ON LATE XARITIES OF POTATOES.

Spraying for early blight on late varities has proved profitable at the Experiment Stations. For late varieties the first application may be delayed until the earliest varieties in the neighborhood show signs of the presence of this disease, when the spraying should be no longer delayed. Since the plants are usually of fair size by this time, the first application should be made with two nozzles per row, using from sixty to seventy-five gallons per acre, and the same for all subsequent applications. The frequency of spraying should be about every ten days, except in rainy weather, when it should be made more frequently, as was above recommended for early varieties.

HOW TO MAKE BORDEAUX MIXTURE.

The strength of Bordeaux mixture to use in spraying for potato blight is : 5 pounds of bluestone (also known as copper sulphate and blue vitriol) and 5 pounds of the best grade of stone lime to 50 gallons of water. The bluestone can be dissolved most readily by hanging it near the top of the water. The lime must be fresh, and of the best grade, aod should slake readily. It should be slaked several hours or more before it is wanted. When ready to apply the Bordeaux mixture, the bluestone containing the five pounds of bluestone, should be diluted to about thirty-five gallons. The milk of lime, containing the original five pounds of stone lime, should then be diluted to about fifteen gallons, and poured into the barrel with the diluted bluestooe solution. The resulting product is the Bordeaux mixture, ready for use. Any poison needed for potato beetles may then be added, thus spraying for blight and the potato bugs at the same time.

TESTS FOR BORDEAUX MIXTURE.

If the lime used is of low grade, there is danger of burning of the foliage from the Bordeaux mixture. A good test is to hold the point of a knife blade in the mixture for a short time. If cupper collects on the blade, more lime must be added to prevent injury.

A good chemical test is by means of potassium ferrocyanide. Dissolve an ounce in a small quantity of water. To test the Bordeaux mixture, take out a dipper-full after stirring well, and let settle for a few minutes. Then pour into it a few drops of the potassium ferrocyanide solution. If a rust-like sediment forms, more lime must be added. If no sediment forms, and there is only a slight yellow discoloration, sufficient lime is present. Potassium ferrocyanide is a very deadly poison.

STOCK SOLUTIONS FOR BORDEAUX MIXTURE.

Stock solutions of bluestone and lime save much trouble when Bordeaux mixture is being used on a large scale. A stock solution of bluestone may be prepared by dissolving in a keg or earthen jar all of the bluestone that the water will hold. A supply must be left hanging in the top of the water at all times in this method. A gallon of such a solution will contain three pounds of bluestone, and the amount taken out can be adjusted to the number of pounds of bluestone desired.

A stock solution of lime, may be prepared by slaking a certain number of pounds of lime and adding enough water so that each gallon will contain two pounds of lime. The milk of lime must be well stirred before taking any out, or there will be danger of not getting enough lime into the Bordeaux mixture to keep it from burning the foliage.

CLOSING CHARGE.

Throughout all this work, it must be remembered that high pressure, thorough application, constant agitation and careful straining are essential to success.

Provide Against Short Pastures.

An abundance of pasture grass such as now prevails is not at all unlikely to be available continuously throughout the Summer. With rare exceptations such has not been the case in past years, and it is not at all probable that it will be this year. A cow to do her best requires abundant forage. She may exist, and possibly keep in fair condition on medium or scanty pasture, but sustained production with attendant profits is not possible under such conditions. The farmer of foresight has already provided, or will now make provision, for any exigencies relative to the feed supply that may occur.

Oats and other cereal crops alsown may be used to any extent required as a soiling crop during their respective seasons. The pinch, as a rule, is not felt, however, until after these crops have reached that degree of maturity where they are unsuitable for soiling. It is a commendable practice to seed a small area at about this time to oats and peas, which may be used if required after the main crop is past the proper stage for soiling purposes. This crop if not required may be harvested in the usual way for grain. The pinch usually comes during the first three weeks of July. Unless alfalfa is available, oats and peas as a soiling crop should be on hand to tide over this period.

Even a later sowing, in some cases, would be advisable. Corn is of little benefit until it has reached the tasseling stage, and until then the late sowing of oats and peas will prove most valuable to maintain the milk flow while the corn is becoming ready.

Those who wish a crop that may be pastured should resort to the one-year pasture mixture recommended by Prof. C. A. Zavitz, of the Ontario Agricultural College, which is Siberian pats, 51 pounds; Early Amber suger cane, 30 pounps; common red clover, seven pounds; a total of 88 pounds of seed per acre. This crop is ready for pasturing in from five to six weeks' time and has proven a valuable pasture mixture in the experimental work at the college.

Cement Floors in Cow Barns

Where cow stables are cemented right up to the manger, there is constant trouble saving the knees of the cattle and in keeping bedding under them. We have until recently used wood as flooring, but when installing cement in our cow byre I decided to leace a trench four inches deep and 20 inches wide where the front feet of the cows would come. This trench we filled with blue clay, which soon packed very solid. It acts as one of the best aids in keeping bedding under the fore feet and in saving the cows from sore knees.

With this equipment in the stalls this past winter, we have had no trouble nor do we anticipate any from the cuases mentioned above. The men who put in the cement work were very loath to do as I requested, as they had never seen the like before. The plan now has the approval of all who have seen it, and no money would induce me to have this trench filled with cement, which, however, could easily be done at any time if one so desired.

Another advantage of the clay is that it is warmer than cement and it would appear that cement will ere long be universally in cow byres. Those intending to put in cement floors under their cattle should certainly give consideration to this point of having clay under the front feet of the cattle.—J. H. Caldwell.

HORTICULTURE

Box Packing in the Annapolis Valley.

Editor The Maritime Farmer :—

The rapid development of Nova Scotia's export trade in apples warrants greater attention being paid in that province to box packing. British Columbia has made her reputation in fruits through adopting the box packing and those States of the Union that employ this means of packing are the ones that we hear so much about in regard to prices. Nova Scotia's reputation for the production of high quality apples was made long ago, but she can obtain a still greater one by the use of the box in the packing of her best grades. The fact that last year some Nova Scotia apples were sold in the Old Country at $6.00 a box shows the possibilities. This figure, of course, is exceptional; but it is not exceptional for apples in boxes to sell for twice as much as the same bulk in barrels.

Our British Columbia friends, who are the best self-advertisers on the continent, continually say that the East will be barrelling apules for years to come. In a letter that I received recently from a prominent fruit grower ,n the Okanagan Valley, the statement was made that Nova Scotia will not adopt the box package because "she can't get out of the rut." If this is so, Annapolis Valley growers should wake up. But are they in a rut—are they asleep? Men who know, say "No"; and rightly so. Nova Scotia was in the apple business many years before British Columbia was thought of as a fruit country and she commenced operations with the only package then known for the purpose, the barrel; and she made her great reputation through it's use. Now that conditions have changed and that the demand is gradually calling for a more convenient package, she is alive to the need. Box packing is not a new thing in Nova Scotia, but its use has not yet reached the stage that it has in British Columbia where the fruit business was started at a time when the box had proved it's worth in the frdit industry of the western states. In Ontario the box is being used more and more each year and some of the Co-operative Fruit Growers' Associations are using it exclusively.

While the near future will see the box in more general use, it never will take the place of the barrel for all purposes. Only No. 1, and fancy apples should be placed in boxes and all other marketable grades in barrels. The idea that is being established and that must be maintained in the minds of British buyers and consumers is first quality, always first quality and only first quality in boxes. This should form the basis of our export commerce in box fruit. There is no place for doubt in quality in contemplating the sale or purchase of a box of apples. Let the barrel be regarded with suspicion if we must (and even this bad business) but the box should be established as the package for quality that is guaranteed. This can be done only by the growers and packers themselves. Government inspection may and does have its influence but it is the man behind the goods and who packs it that is responsible for the good or the bad that is in it. It is evident, therefore, that the development of the boxed-fruit trade of Nova Scotia, of of any province, depends upon absolute honesty. Couple this with well-grown fruit, properly selected and evenly graded, and the possibilities of box-fruit are almost unlimited. Now that Nova Scotia fruit men appreciate the situation they should give box packing greater attention during the coming season. They grow the right kind of apples—in variety, in color, in quality, in everything—and they have the business ability and skill to make the most of them. A more universal adoption of the box packing will help to do it.

A. B. CUTTING.

Prince Edward Island's Possibilities for Culture of Small Fruit and Vegetables.

Prince Edward Island, though a small province does its farming, generally speaking, on the large. Intensive farming in the true sense has not been practised to any considerable extent. This is not because of any lack of adaptation, but because of the comparative markets and the further lack of proper facilities for reaching more distant ones. Lack of express arrangements, iced cars and too frequent handlings are serious defects in our transportation conditions. Market gardening, therefore, with the exception of what little may be needed to supply the limited demand of the small towns is not followed, except for the farmer's table. So limited are the markets that even with the small attention paid to this aspect of agriculture, a glutted market is the common condition in the season of fruit and vegitables; and the prices are often of the lowest.

Oats, wheat and potatoes are the Prince Edward Island staples, and these wholly occupy the farmers thoughts and attention. He cannot seem adapt himself to a small acreage. A hundred acres, and olten double this amount, is as little as he cares, to bother with. Here he uses his gang plows, combination seeders, harvesters and other complicate machinery. This is his ideal of farming. A few acres in fruits and vegetables, largely cultivated with hand tools, would strike him as a serious drop in the dignity of the profession. This would seem to be a more fitting occupation or diversion, by way of pastime, to the man who had who had retired from active life. These ideas are the outcome of generations of usage—a usage that has largely been made necessary because of market conditions.

Notwithstanding the comparative absence of intensive farming as represented in the cultivation of vegetables and small fruits, it is doubtful if there is any part of the Dominion where the natural conditions are more favorable than here. The island itself is often spoken of as "the garden province." This is not because of its diminutive size, but on account of its uniform fertility. The land is smooth, gently undulating, free from rocks and swamps and unencumbered by small stones. The soil is a light sandy loam, warm and wonderful easy of cultivation. The natural drainage is about perfect The summers are bright and warm with generally cool nights, while the rains are, as a rule, frequent, but not excessive. The Autumn is mild and open to a degree not experienced on the mainland. Insects and diseases are much less numerous and destructive than in other places. The season being a little later than most mainland sections. Prince Edward Island products are matured when outside markets are clean, thus removing competition. It will be seen therefore, that these conditions, both of soil and climate, are about perfect for the purpose of the small fruit and vegetable grower.

This claim is borne out by the actual results. Anyone attending our provincial exhibition or the Charlottetown matket will be surprised at the excellence and variety of the stuff grown. The small fruits, such as cherries, strawberries, raspberries, blackberries, currants and gooseberries do amazingly well. I believe it is a law of nature that the higher the latitude where fruit will come to full maturity, the better will be its quality. There seems to be something in this alternating of cool nights with bright warm days to give firmness and flavor and luciousness to fruits and vegetables grown under these conditions. These qualities are noticeable to a marked degree in the fruits and vegetables grown in Prince Edward Island; but the great need is a market.

Charlottetown, the capital, has about 12,000 inhabitants, It is not an industrial centre, but is largely a city of homes where people have some leisure, and many of whom possess gardens of their own. The largest cities in the Maritime Provinces have but 50,000 inhabitants, and they (St. John and Halifax) are at present a day's journey distant. These, and other disadvantages, make even these limited centres impossible to the Prince Edward Island grower. But the cities of the Maritime Provinces are growing in size and increasing in number, and no doubt with their growth will come a corresponding improvement in transportation facilities. If there were in the Maritime Provinces a city of say, the size of Boston within reasonable distance, it would simply revolutionize this industry in Prince Edward Island. A number of our Maritime cities are bound to grow to large industrial centres in the not distant future and when this takes place it will transform agricultural methods on Prince Edward Island.

When these conditions prevail it will not only change our methods of agriculture, but will be of great advantage both economically and politically. When the island is transformed into a province of vegetable and fruit gardens, rather than one of oat and wheat fields, the average farm would be large enough at 25 acres. This would make possible an increase in the population by about 400 per cent. In other words, instead of having 103,000 population, with no vacant lands, we would have room for about 400,000 people by thus reducing the acreage of the farm. Such an increase would tend to attract manufacturing, and thus give corresponding growth to our towns and cities. It is easy to see that such an increase would at least help to restore our lost representation at Ottawa, and give us such an importance as to bring the tunnel, now a fond hope, in the realm of practical certainty. In the light of these facts a fruit and vegetable garden assumes a great and new significance.

Something could even now be done by a little improvement in transportation facilities, and a little more business enterprise. To illustrate we may refer to the Kentish cherry orchards which everywhere obtain here. The various varieties of sweet cherries do exceedingly well in different parts of Nova Scotia and are about the only ones cultivated. These cherries are largely sold in St. John and Halifax, and are put on the market about the middle of July. Their season is, however, short and frequently they fail almost entirely. Cherries of all kinds throughout New Brunswick, for some reason, are made conspicuous by their absence. On Prince Edward Island, however, the Kentish cherry is grown with the greatest of ease, and in splendid abundance. There is scarcely a farm, large or small, between East Point and North Cape, that has not a cherry orchard of some description. The crop very seldom fails; in good years, the yield is enormous, and the local demand is comparatively limited. These cherries come into maturity about a month later than the Nova Scotia crop, and being equally suitable for preserving as for table fruit, it will

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We wish all who need a Cream Separator to read the following letters, which speak for themselves.

Locksley, Ont., May 11, '07. Windsor Supply Co., Gentlemen: Please find 30c for which send me India rubber rings for No 2 Windsor Cream Separator. My Separator has been in use for four years, and still gives as good satisfaction as it did the first day we used it. Yours truly, T. Hamilton.

Thornhill, Man., July 27, 1909. The Windsor Suppy Co. Dear Sirs:—You will wonder if I ever received my Separator. I wanted to give it a good trial before I wrote you. I find it **does good work.** We like it real well I am, yours truly, Mrs. S White.

We receive scores of letters like the above from all parts of the Dominion Send for circular, giving full particulars by return mail. All orders filled the day received. Our prices are as follows :—

No. 0. cap. 100 lbs. milk per hour.....$10.00
No. 1 cap. 210 lbs. milk per hour..... 25.00
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N. B.—We have in stock a few No. 1 and No. 2 Separators, which have been used only for a short time, and then exchanged for larger machines These we are selling, while they last, at the following very low prices, for cash with order only :—No. 1, $14 00; No. 2, $16 00 These machines are all practically as good as new, and all will do perfect work, skimming as close as any separator you can buy at any price, but of course they do not look like new, nor can we sell them as new machines. We advise those who wish a first-class Cream Separator almost for a song, to order one of these. Times are hard don't be humbugged by agents into paying big prices any more for Cream Separators. Address,

Windsor Supply Co., Windsor, Ont.

Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 15th, 1910.

Charlottetown Exhibition, September 20th to 24th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910.

Had a Bad Cough

FOR A NUMBER OF YEARS. WAS AFRAID IT WOULD TURN INTO

Consumption.

Too much stress cannot be laid on the fact that when a person catches cold it must be attended to immediately or serious results may follow.

Thousands have filled a consumptive grave through neglect.

Never Neglect a Cough or Cold, it can have but one result. It leaves the throat or lungs, or both, affected.

Afraid of Consumption.

Mrs. A. E. Brown, Ottawa, Ont., writes:—"I have had a very bad cough every winter for a number of years which I was afraid would turn into consumption. I tried a great many remedies but only received temporary relief until I got a bottle of Dr. Wood's Norway Pine Syrup and after taking two bottles my cough was cured. I am never without a bottle of Norway Pine Syrup."

Dr. Wood's Norway Pine Syrup is the medicine you need. It strikes at the foundation of all throat and lung complaints, relieving or curing all Coughs, Colds, Bronchitis, Asthma, Croup, Sore Throat, etc., and preventing Pneumonia and Consumption.

So great has been the success of this wonderful remedy, it is only natural that numerous persons have tried to imitate it. Don't be imposed upon by taking anything but "Dr. Wood's." Put up in a yellow wrapper; three pine trees the trade mark; price 25 cents.

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It Sticks

A sharp shower, and the afternoon's work spraying the potato patch with Paris Green is lost. Not so with

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Lead Arsenate

Even after two or three rains enough will be left to keep down the bugs.

It is just the same when you are spraying fruit trees for Codling Moth or any other insects—"VANCO" Lead Arsenate sticks best and kills surest.

"VANCO" Lead Arsenate contains 15% to 16% Arsenic Oxide and only 40% moisture average.

It sprays easily and never burns the foliage.

10c. to 13c. per lb. according to quantity.

"VANCO" Spray Chemicals are prepared in Canada, in our laboratories, by practical men. Government analysis and practical tests have proved them high in quality. Yet they are lowest in price.

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be seen that they should have a splendid demand in the cities of the adjoining provinces. But as a matter of fact, I have never heard of a shipment of these cherries being made, and when the local demand is supplied the balance of the crop is either given away or left for the birds or perchance, to rot upon the ground. It will readily be seen that the owner of a cherry orchard at the present time is at a distinct disadvantage, since any neighbors that may be invited to share the bounty of his crop invariably share the bounty of his table.

Since this cherry is firm and a good shipper, it seems strange that some attempt is not made to market them outside of the island. In the vicinity of Summerside or Charlottetown, cherries could be picked in the morning and arrive in St. John or Halifax in time for delivery the same evening, under present arrangements. At greater distances from these centres, they would require to be picked the evening before, but, in any case, they should reach their destination in a prime condition. As they come on the market when there is generally a scarcity of small fruit, they should meet a ready sale at good prices. Here it would seem is where a little enterprise might make profitable a wasted asset.—Rev. F. A. Wrightman, in Canadian Horticulturist.

Some Factors in the Control of Moisture in Orchard Soils.

I shall briefly state some of the more important conclusions from researches that have been made at Ottawa. For the figures and details, consult the publications of the Dominion Experimental Farms.

1. The growth of rye, oats and buckwheat as cover crops in the orchard has always resulted in the removal of larger amount of soil moisture than those lost by the growth of one of the legumes—clover, hairy vetch, soya beans, etc. The draft made by the cereals upon the stores of soil moisture is greatest between May 1st and July 15th—a period when it is required for the use of the orchard trees. We have found that the equivalent of approximately ten inches of rain may be lost in this period from soil carrying a grain crop, over and above that lost from a cultivated soil.

It seems more than probable that the smaller amount of water lost from the soil carrying the cover crop— clover, vetch, etc.—as compared with that carrying a grain crop may be in part accounted for by the more perfect shade from the sun and protection from the wind afforded by the former crops.

2. More moisture may be conserved by sowing the cover crops—hairy vetch, soya beans, horse beans—in drills and cultivation between the rows from time to time throughout the summer, than by sowing these earth mulch is more effective than crops broadcast. In other words, the the shade offered by the crops in conserving moisture. This method of growing cover crops seems to offer a means of furnishing material for enrichment of the soil without making any excessive demand on the soil moisture supply—and hence may prove valuable for adoption in districts that are subject to drought in the late Summer. It is quite possible for a soil to become so dry in the Autumn months that the fruit ripens prematurely. On such soils, of course, the ordinary cover crop, sown in July, may do more harm than good.

3. There appears to be little difference between the moisture content of soils constantly cultivated throughout the Summer and that of soil under a thick mulch of straw. Ten to twelve inches of straw seems to be very effective in conserving moisture to such a method are cost of material, application and removal—for the but the objections that may be urged latter would be necessary if there were danger of the trees continuing their growth into the late Autumn—and the probability that the straw mulch would cause a surface development of the root system, resulting in injury to the trees from Winter killing.

4. Undisturbed fallow land readily dries out and further, may be taken possession of by weeds which serve to increase the loss of moisture. We have instances in which such land has been found to dry out to the same extent as land in sod.

The desirability of immediate cultivation after plowing an orchard has been shown, if soil moisture is to be conserved. A period of three or four days with the upturned soil as left by the plow may very seriously diminish the soil's store of water.

(Continued on page 605.)

FROST & WOOD No. 8 MOWER

2 HAY-MAKERS

THEY WORK WELL TOGETHER

An ideal combination for getting in your crop of grass. Our **No. 8 Mower** with its strong, substantial build, its accurate, clean-cutting power and ease of operation, is a real money-saver and profit-earner for thousands of farmers at every point in the Dominion. It is strong, durable, needs few repairs. It works day in and day out, proving the stalwart honesty and mechanical excellence put into every gear and wheel, knife and shaft, cutter-bar and pitman.

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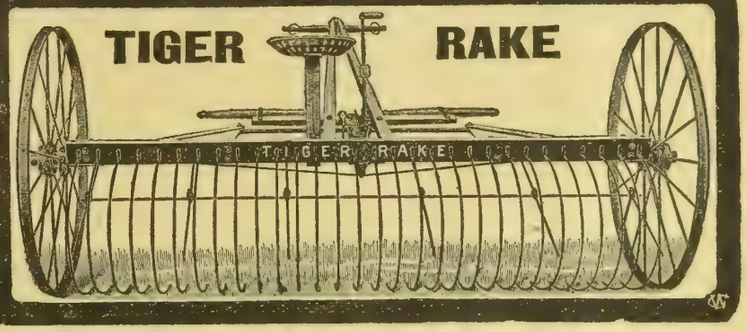

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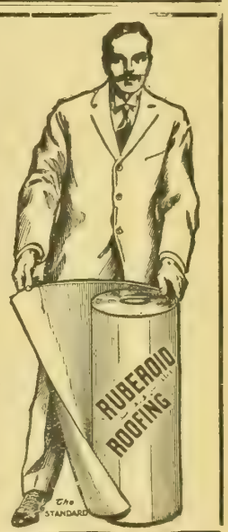

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DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Milk Production.

During the last few years considerable data has been gathered in our experimental work here with dairy cows which indicate that it is possible in another way to increase the percentage of fat to an abnormal degree for a short time and probably to a less degree for a longer time.

The rule seems to be that when the ration of a cow is insufficient to support her milk production, and she draws on the fat stored in her body, that the per cent of fat in the milk is increased. The reverse seems to be true as well; that is, when she is gaining in weight or storing fat on the body there is a tendency for the per cent of fat in the milk to be lower.

This increase of the per cent of fat in milk due to transfer of fat from the body to the milk, is most marked immediately after calving. In the course of one of our investigations a Holstein heifer calved in as fat condition as was possible to get her by continuous heavy feeding from birth. Another heifer of practically the same age and breeding was fed from birth until she came in milk on a ration of skim-milk and hay, without any grain whatever. As a consequence she was decidedly thin at calf birth.

The milk of the heifer in good condition tested over 4 per cent at the start, while the milk from the one in thin condition tested about 3 per cent. The fat heifer declined in weight for several weeks and during this time continued to show a high per cent of fat. When her weight became stationary her per cent of fat declined until it was practically the same as the other. The thin heifer made no decline in weight for several weeks and showed no decline in the fat in her milk. Later she began to gain in live weight, she having been put on a liberal grain ration immediately after calving. Her per cent of fat increased slightly until the two became practically together.

Similar results have been obtained with two other pairs of heifers under the same treatment. The most marked example of how this works out is shown in the following:

A mature Jersey cow was fed a liberal ration for two months before calving in order to get her unusually fat. Immediately after the birth of the calf she was put on a ration that was sufficient only to maintain her body weight, according to the maintenance values as usually estimated. She was fed for thirty days on a ration of three and one-half pounds grain and seven pounds hay a day, which was estimated body maintenance. At the beginning she produced twenty-one pounds milk a day. During the thirty days the decline in milk was very slight. Indeed, at the end of the thirtieth day period she was producing nineteen and one-half pounds a day. During this time she lost 115 pounds in live weight. In the beginning she was smooth and excessively fat for a Jersey cow, but at the end of the thirty days she was decidedly thin and emaciated. Beginning with the twenty-eighth day it was observed that she was becoming weak and she staggered as she walked. On the twenty-ninth day she could scarcely get up when down, yet she produced nineteen and one-half pounds of milk. It was not considered safe to continue the test any longer, and her ration was increased to a normal amount. During the thirty days this cow produced milk continuously without any feed whatever to supply the nutrients.

It is evident that the solids in the milk must have been taken from the body and the decline of 115 pounds in weight shows this was the case. The average per cent of fat during the thirty days was 6.9; the normal test for this cow is slightly under 5 per cent. Within forty-eight hours after her feed was increased at the end of the thirty-day period the per cent of fat in the milk declined about 2 per cent.

Further and more extensive trials are necessary to fully prove this law and especially to determine its metes and bounds, but it is believed that these results are of great significance in a number of ways. In the first place it will mean that short periods are absolutely valueless in carrying on feeding trials with dairy cows. If a cow will produce milk for a month without having any food to furnish the necessary material, it is evident that the effect of any feed cannot be measured in a short period. In an experimental way it also has a bearing on methods of carrying out many lines of investigation, as, for example, the effect of feeds in the composition of milk, since here we will have to avoid the probability that milk fat taken from that stored in the body and secreted in the milk is of different composition from normal milk fat.

Another interesting question brought up by these experiments is its relation to the common method of carrying on seven-day tests of dairy cattle. It has been the subject of comment frequently by leading authorities that in recent years much higher fat percentages are secured in seven-day tests than was formerly the case.

The possibility of increasing the per cent of fat in milk for a period after calving by the means mentioned has apparently been used by those who are the most successful in making those phenomenal seven-day tests. A cow that will average 3.2 per cent of fat for the year, can with reasonable certainty be made to test 4 per cent or even higher for a week if properly handled.

The way it is done is to fatten the cow as much as possible before calving. Then after calving the animal is fed very moderately, and the test is begun within four or five days. Under these conditions the animal has insufficient feed to support the enormous milk and fat production. Since her body is loaded with fat, this fat is taken from the tissues and a large amount of it secreted in the milk.

As said before, a large amount of additional investigation will have to be carried on to establish the limitations of this principle and to make it possible to understand its full significance. The investigations under way in this line, it is hoped, will supply data that will make it possible to reach some definite conclusions. The material already at hand is sufficient and so consistent in every respect that in the opinion of the writer there is no doubt of the accuracy of the general proposition laid down.

E. H. ECHELS.
Missouri Agricultural College.

Care of the Udder.

All domesticated animals are liable to suffer from "Mammitis," or inflammation of the udder. This disease is also known by the name of garget. The cow, however, is more likely to suffer than any other animal and from the importance of the lacteal secretion it is always more or less serious and if not looked after in early stages, it is likely to interfere very much with the usefulness of the animal in the production of milk. The disease is more likely to occur during the first month after calving because during this period the udder is usually in the height of its functional activity occasionally it is met with previous to calving.

CAUSES.

Mammitis is due to a variety of causes. In newly calved cows (especially in heavy milkers), we find a certain amount of inflammation in the udder due to the great activity of the gland, at that time, but it usually quickly subsides as soon as a portion of the milk is removed, which should be done regularly and repeated often enough to prevent the inflammatory action from increasing. Exposure to wet or cold, such as lying on the cold ground or exposure to draughts are predisposing clauses. Filthy and poorly ventilated stables will generate a miasma, which is liable to have an injurious effect on the udder.

Too much stimulating food is likely to set up a plethoric condition of the system which has a tendency to produce the disease and it is sometimes produced because of the presence of tubercular deposits in the udder. It may also be produced by mechanical causes such as contusions, wounds, injuries in milking or from blows from the head of the calf while sucking.

TREATMENT.

If taken in the early stages this disease usually yields readily to treatment. A good strong dose of purgative medicine such as a pound or two epsom salts should always be administered. Then heat and moisture should be applied to the udder in the form of fermentation

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We want a farmer in every locality to act as our representative. No experience necessary. No financial obligations to be met before starting to draw your commission. All notes, etc., are looked after by us.

District representative will call and instruct. Every assistance given in making a sale. The **Empire Cream Separator** is the easiest to clean, easiest to turn, and easiest to sell of any separator on the market. A card or letter written us today will be attended to at once. Just now, between planting and harvest, you will have a breathing spell—why not make a few dollars? No loss of time from your farm work, no investment, no travel, and no fault finding after machine has been placed. No better proposition has ever been offered you. Write today.

The Empire Cream Separator Company of Canada, Limited
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Farmers Take Right Stand

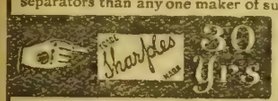
Canadian farmers rightly insist that a cream separator which contains neither disks nor other contraptions, and yet produces twice the skimming force of common, complicated machines, must be most modern. They believe such a separator has made complicated machines out-of-date. This is common sense and explains why Canadian farmers are buying simple

Sharples Dairy Tubular Cream Separators

Dairy Tubular Bowl. Made right. No disks needed.

in preference to disk filled or other common, complicated machines. The illustration shows all there is to the Sharples Dairy Tubular bowl. It containsneither disks nor other contraptions, produces twice the skimming force, skims faster, skims twice as clean, wears a lifetime and is several times easier to clean than common separators.

The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.



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or poultices. A convenient method of doing this is to support the udder with a broad bandage brought up and secured over the loins, four holes having been cut in the bandage through which the teats will protrude. Then stuff cloths wrung out of hot water between the bandage and the udder, the cloths to be renewed as often as necessary to maintain heat and moisture in the parts. In thus poulticing the udder it is a good practice to remove wet cloths at night and replace with wool which has been heated by placing in a bread pan in the oven which will keep the parts warm over night, the poulticing to be repeated next day if necessary. Poultices often do more harm than good if allowed to become cold and sodden over night, but the heated wool will prevent any injurious reaction. This treatment combined with hand rubbing the parts freely and the application of a little oil will generally prove successful in the early stages. If one or more quarters of the udder are badly affected and are very hard and sore, and especially if matter has formed, the dairyman will generally consult his best interests by employing a competent veterinary surgeon. And even then there is a danger of the gland being more or less damaged and possibly destroyed. Not unfrequently the disease in such advanced stages, will prove fatal.

Garget in Cows.

Veterinarians and dairy farmers are full of trouble constantly in reference to garget. In some herds it amounts almost to an epidemic. Yet we wish to say this:

In the last twelve years, keeping from thirty to forty cows constantly, we have had but one case of garget and loss of a quarter. That case was with a 2-year-old heifer who developed a wonderful udder and we foolishly allowed it to go too long, without relieving the strain by milking before calving. Our exemption from garget and stopped teats we attribute very largely to the fact that each cow has a stall by herself and always a warm bed of clean straw or other bedding to lie upon. We must remember constantly that the udder is the seat of an enormous amount of blood circulation. It must always have a warm bed to come in contact with or else circulation will be checked and congestion and inflammation will set in.

It is for this reason that we so strongly urge dairymen never to allow their cows to stand on cold cement floors. We cannot know any too much about this wonderful machine, the cow, for she is the embodiment of the greatest of all mysteries, that of motherhood.—Hoard's Dairyman.

Dairy Notes.

Palatable and digestible food is necessary if the cow is to give a good flow of milk.

The winter calf is most profitable providing it is well cared for.

Remember that the winter calf can not do well on pastures alone this spring. It should have an allowance of grain.

It pays to keep stock, especially young stock, thrifty.

Co-operative breeding associations are the coming things. Cheapest methods of getting good stock.

The dairy cow would have to do a great deal of selecting and culling before she could get the proper man to care for her.

If man was half as good to the cows as he thinks he is, the production of fat per cow would be materially greater.

Magnet Cream Separator "Sanitary Strainer"

For STRAINING MILK. Patent No. 123484.

PRICE $1.00 COMPLETE.

Fits the MAGNET Tank or any pail of same size.

All milk strainers have failed to meet the requirements of Dairy Authorities except the cloth strainer, which can be washed clean.

The difficulty of holding the cloth on the top of the pail or tank has prevented the general adoption of the cloth strainer for the cream separator.

By a simple spring device (MAGNET PATENT), which circles the top of the tank and holds the cloth in position, this difficulty is overcome and the milk strained directly into the tank.

The advantages are :—

1st. Great convenience in straining the milk.

2nd. It retains the animal heat thus enabling more complete separation of butter fat from the milk.

3rd. Prevents dust or foreign matter from falling into the tank.

4th. Nothing to wash except the cloth.

5th. Time and labor saved. Adjust the spring over the cloth, holding it tight around the top of the tank, that is all.

6th. The only "Sanitary" Strainer known.

7th. It is simple, clean and will not wear out.

8th. The same MAGNET quality to the strainer as in the Cream Separator.

9th. Every MAGNET Tank should have one fitted on.

Fill in the coupon with name and address, enclose **one dollar** and strainer will be sent you prepaid. Money refunded if you do not find it the handiest article in your dairy.

Please send a MAGNET "SANITARY STRAINER," charges paid,

Enclosed please find $1.00 stamps of postal order. To ..... P. O. ..... Province .....

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Improved Automatic Compressed-Air Sprayer

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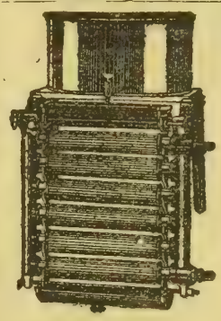

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LIVE STOCK.

Feeding Calves for Veal.

About a year ago I wrote you a letter which appeared in the "Dairyman" on the subject of utilization of skimmilk and the cheau vealing of calves by its use. At that time little experimental knowledge was known on the subject outside of three or four experiment stations, notably that of Kansas under charge of Prof. D. H. Otis of the Kansas Experiment Station. At that time I had tried the practice on three or four calves with marked success.

The article to the Dairyman was largely copied in other agricultural papers. It aroused quite extensive experiments in many parts of the country, and I have been in receipt of many letters from persons who have tried the methods therein described. Nearly all were successful to a marked degree. The saving was from $10 to $12 and often more, each calf. This is a big saving in the dairy business. I encouraged the practice among the dairymen of my locality and watched results. I watched over 200 calves with which this method was used. I found but a very few failures, and in every case but one, was easily able to trace the cause of failure. In nearly every case it was overfeeding. In one large dairy "white scours" broke out, and of course the calves were not a success. The "dried blood food" remedy was not tried, or I presume they would have come out all right.

Where directions were carefully followed I did not learn of a single failure. Scours were almost unknown.

The method described was that of the Kansas Experiment Station, with a single change. It was as follows :

Calves were weaned at about twenty-four hours old. They were then fed about four quarts daily of the mother's milk. Most feeders fed but twice per day as most farmers do not care to take the time to feed three times. So far as I could learn those fed twice did as well as those fed oftener. This was continued for five to seven days. Then part of the new milk was removed and skimmilk substituted, fresh as it comes from the separator. At the same time a sort of gruel or porridge is prepared from white wheat middlings and corn meal, by putting two parts middlings to one of meal, (there are plenty of other compounds that do well) scalding or cooking so as to readily digest and a gill or so of this added to the milk. It must be thin enough to readily stir into the milk without lumps. About a week is used in changing gradually from new to skimmilk. The gruel and milk may be slowly increased until at three or four weeks the calf is fed eight quarts of milk per day.

At from two to three weeks old the calf should be taught to eat shelled corn. Most calves will take to it readily at about the time they will begin to nibble a little hay or oats. It should be put in a box in reach of the calf and a supply kept where he can have all he will eat, at least until he eats more than a quart per day. In teaching it may be necessary to put a little in the mouth holding up the mouth until he chews it. As soon as they get the taste they usually eat it readily and greedily. I have never known a case where feeding all the corn they would eat produced scours. Corn is preferable to meal for the reason the calf thoroughly masticates the corn before swallowing, while it will take the meal into the stomach without mastication and indigestion is liable to follow. Butterfat is a carbohydrate with protein added. A pound of corn worth two cents will go as far toward fattening the calf as a pound of butterfat worth thirty-nine cents or more. It takes a little longer for results with the skimmilk and corn than with the new milk for the reason that the digestive organs do not quite so soon master the corn, but being a much cheaper feed it pays to wait. I found instances where the calves put on over twenty pounds of flesh in seven days with the skimmilk and corn feed, between the age of four and five weeks. At the present price of veal it meant over twenty cents a day at a cost of not over two cents a day for corn. As a rule the calf will put on more flesh between six and eight weeks of age than in twice the time prior to five weeks. If the milk be fed half new and half skimmed for a week or so before marketing, it will be found a profitable thing to do. The added new milk at that age gives a finish and gloss to the calf that adds greatly to his marketability. Eight quarts of milk per day up to eight weeks is enough for a calf and too much for some.

There should be no set age for marketing calves. Sell them when fitted for market. Some calves are better fitted at six weeks than others under the same treatment will be at ten weeks. Keep them until ready to sell. This is in most markets before they reach 200 lbs. but as near to it as is safe, say from 175 to 190 lbs. Most markets object to cattle over 200 lbs. when offered for veals.

Two or three doses of ground blood meal prepared for use as cattle food, is almost an infallible cure for scours The Kansas Experiment Station has tested in many scores of cases, with universal favorite results.

In the foregoing method of feeding calves for veal or otherwise, it will be found that at eight weeks they have consumed about 800 lbs, of skimmilk, and about 75 cents worth of corn and about 75 cents worth of good new milk. If fattened on new milk it will in the same time have eaten about $12 to $14 or more worth of butterfat, making a difference of over $10 expenses in the feed cost of vealing a calf, if kept until nearly 200 lbs. weight. In a large herd of veals this is a matter worth looking after. C. L. PECK, Pennsylvannia. in Hoard's Dairyman.

Profitable Feeding of Export Cattle.

In order to finish export cattle so as to have them command such a price as will be in keeping with the cost of production, with the further cost of carriage to a distant market, and the rick incurred, it is absolutely necessary to have the right sort to start with. Neither mongrel-breds nor steers in which is a mixture of dairy-breed blood can ne made to yield any profit. The possible margin of direct gain is too small to admit of taking chances in handling an inferior class, which in ninety-nine cases out of a hundred will fail to leave a balance on the right side of the account. ffiK .

Having secured good cattle, bred along beef-making lines, the next consideration will be as to the age at which the finishing period should begin. The proper reply to that query is that much depends upon circumstances. With abundance of grass at little or no cost, it will be found more profitable to delay the finishing until three or four years old. Beyond that age, steers become in appearance too much like oxen to win attention in the sale yards.

Where good cattle are raised, and finished without changing ownership, on high-priced land, it will be found more profitable to reach the market at an earlier age. Thirty to thirty-six months should in such cases be the limit. Indeed, as the lank increases in value, so must baby beef-making be more closely considered, but that does not concern us now, as it is the export trade which we are discussing: i

To command the top price in British markets, it is the thick-fleshed, well bred cattle we must send across the sea. It is in the high finish that the largest profit is always found, and no country discriminates more in favor of good beef cattle than do the British Isles. M

While feeding to a high finish is so certain to bring satisfactory results at the latter end, we must not forget that in getting that finish we may "pay too dear for our whistle." It is comparatively easy to get thick flesh on our cattle if we have abundance of the right kinds of feed and we keep cost out of our reckoning. To get the high finish at the least cost requires careful consideration and close attention to ways and means.

In Ontario we have concluded that 100 pounds live weight can be secured in field feeding, with plenty of grass and other forage, at one-fourth the cost of getting an equal weight on in stall-finishing. The lesson to be learned is that all the weight and flesh possible should be got in the field and so reduce the heavy stable-feeding to the shortest possible period of time. i

With cheapness of production kept in view we have in recent years started the growing of rape for fall feeding. Then when pastures are usually at their worst, the succulent feed provided by the rape field, together with the dried-up grass, or, if such grass is not in reach, then hay fed in racks, not only prevents a falling off of flesh, but causes a rapid and very cheaply got increase of flesh, of bloom and of weight.

Having for several recent years experimented along that line, perhaps it may be interesting to state of the results.

1 mo. heavy stall-feeding .. 54.00

1905.

Aug. 6--9 steers, 1180 lbs-, cost $435.00
1 mo. grass and 2 mo. rape . 54.00

Total cost $543.00

Dec. 7—Sold averaging 1453 pounds at 5 cents, $654.00.

Then $654.00 less cost, 543.00, and freight to Toronto, $11.30, left to profit account, $100.00.

Cost of grain per 100 pounds, $4.40.

Percentage of interest on investment, 4 months, 70 per cent.

1906.

Sept 1--10 cattle, 1195 lbs., at $4.25..... ....$507.25
2 months grass and rape ... 40.00
1 month heavy stall-feeding. 60.00

Total cost $607.25

Dec. 8—Sold, averaging 1407½ lbs., at $5.00 ....$703.73

$703.75 less cost, $607.25, equals $96.50 left to profit account.

Cost of grain per 100 lbs., $4.78.

Percentage of interest on investment. 3 months, 76 per cent.

1908.

Sept. 19—10 cattle, 1237 pounds, 1½ months on brass and raue$ 30.00
1 1-3 mo. heavy stall-feeding.. 80.00
Freight to Toronto 13.00

Total cost $699.00

Dec. 11—Sold, averaging 1378 pounds at $6.00, $862.80.

Then $826.80, less cost, $699.00, equals $127.80 profit.

Cost of grain per 100 uounds, $7.80.

Percentage of interest on investment. 83 days, 97 per cent.

It will be noticed that in each case mentioned, heavy feeding is stall during the short finishing period was practiced. The daily ration to each animal was one bushel Swede turnips, chaffed oat sheaves and clover hay. Some whole hay, 8 lbs., ground grains, and 4 pounds oil cake.

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Chamberlain's Cough Remedy is sold on a guarantee that if you are not satisfied after using two-thirds of a bottle according to directions, your money will be refunded. It is up to you to try. Sold by all dealers.

The advantage of rapid gain in flesh and weight can readily be understood when we consider the little or no increase of weight of frame or offal, while the extra gain os practically all flesh and fat. To insure our getting the most profit in feeding export bullocks, we must aim at getting all the possible cheap grain in the field, especially when the time for stalling is drawing near, and then safely rush the finishing, in as short a time as will be found necessary to get the thick, solid fleshing which will stand the shipping, by rail and on sea.

When export cattle are carried on feed through the winter for spring shipment, it would be found more profitable to give them cheap bulky food during the first three months, and afterwards increase the grain and cake gradually aiming to have them on full feed the last two months. Swede turnips, with straw or hay, will keep the fall rape-fed bullocks going on nicely the first part of winter, with no grain, though a little good bran will be found benifical.

The direct cash profit may not as a rule figure out large, yet it is in the indirect results that the greatest gain will be found. When we consider that of the nutriment or plant food contained in what is fed to animals, their system abstract but less than 20 per cent., leaving over 80 per cent. voided in dung and urine to go back to the land, we realize what indirect profit can be got from feeding what we grow in our stables. We get full market values for the whole feed used with a margin of cash profit besides and only part with one-fifth of the plant food contained in all that is fed. The remaining four-fifths going back to the land, maintains and restores fertility to the soil, making our fields more and more productive as the years go by. Such should be the aim of all progressive farmers nowadays. Keep the soil well stored with available plant food, by the regular application of manure from well-fed export cattle, and crops will become more certain and full average yields may be confidently expected. The feeding of cattle must always occupy a prominent place in a grain-growing country, as the full-finishing of the animals means the feeding of the soil at the same time and continuous full production will be the outcome.

To have export cattle which are fed in stalls for a time ship satisfactorily, a run out to water for 30 to 60 minutes daily is necessary. Fresh water, at will, daily and a constant supply of salt are details which tend to make or mar and to which profit or loss may often be traced.—Jno. Campbell. Woodville.

Notes

A system perfect in every part, regular and methodical must be employed in making butter or everything will go wrong and in inferior product be turned out.

A cow in milk that will not consume a large amount of feed or show that she has not a good appetite, should be discarded from the dairy.

If there are cows in the dairy that suck themselves, that leak their milk or are troublesome to milk, make them ready for the butchers as soon as possible.

Do not overstimulate a cow in order to secure phenomenal results. It does not pay, because the cost of such development is greater than the profit and it injures the cow.

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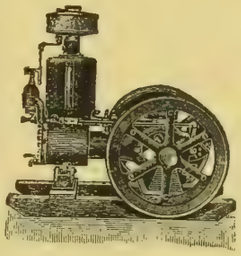

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THE HORSE.

Different kinds of work require different kinds of horses. A horse is of no particular value except for what he can do. To fulfill his mission he must travel. If he can draw a buggy containing one or two persons at the rate of ten miles an hour he is valuable as a roadster. Another horse that can draw his share of a load weighing upward of a ton, even though he moves slowly, performs an equal amount of actual work and is just as useful to its owner as is the roadster. Since all horses are valuable because they travel, although at various rates and under widely varying conditions, it will be interesting to make a study of those parts of the horse's body directly connected with his locomotion.

It is not difficult to understand that, with the horse as with ourselves, all motion is the result of the action of the muscles. About 40 per cent of the weight of an ordinary horse is muscle. All muscles concerned with locomotion are attached to bones, and when they contract they cause the bones to which they are fastened to move The lower part of a horse's legs are nearly all bone, but the muscles in the body and upper part of the limbs are attached to various parts of the bony construction by tendons and can thus produce a motion of the parts located some distance away. The muscles we are discussing, when contracted, are about three-quarters as long as when at rest. The amount of motion produced by the action of the muscles of, say one of the horse's hind legs, will depend upon the length of the muscles and the length and the relation of the bones to which they are attached. The common idea among students of this subject is expressed in these words: "Long muscles for speed, short muscles for power." We have already seen that a long muscle enables a horse to get over the ground rapidly. A short muscle, however, is not powerful because it is short, but because in horses constructed on that plan the muscles are thicker, contain more fibers, all of which pulling together when contracted exert a much greater pulling force than a long, more slender muscle. It is because of this that in buying horses to draw heavy loads we look for large and heavy muscles; while in roadsters we must attach importance to the length of the muscles.

The most of a horse's muscle is in the hind quarters. This may be a surprise to you, but the next time you have an opportunity to see a horse pulling a very heavy load study him carefully. You will be impressed with the idea that most of the work is being done with the hind legs. When the hind foot is moved forward the toe rests on the ground and the leg is bent at the hock joint; if the toe does not slip and the horse is strong enough for his load the muscles above, pulling on the tendons fastened to the back and upper point of the hock, will close the joint, or, in other words, straighten the leg and cause the body to move forward. It is by the performance of this act at every step that the horse moves, although, of course, the strain on all the parts is much greater work when pulling very hard. This will also show the necessity of having large, broad, straight joints and legs that give the horse the most secure footing. You have probably also noticed when driving that many horses put their hind feet on the ground in front of the mark left by the fore feet, and the faster they go the greater will be the distance between the marks made by the fore and hind feet. This shows that the length of a step is determined by the hindquarters; it also explains the need of large, strong hocks, and legs that are not so crooked as to seem weak or so straight as to lessen the leverage afforded by this very wonderful arrangement of the parts.

Then there are some other things that are desired in all kinds of horses. One of these is a short back; that is, short from the hips to the top of the shoulders (the withers). From what we have learned of the hind parts we see that the horse is really pushing the rest of his body along. If the back is short and strong instead of long and weak the whole body will move more easily and rapidly in obedience to the force produced in the hind parts.

Although the hind parts have most to do with the horse's traveling, we must not forget that the front parts are also very important. No matter how much muscle a horse has or how strong his hocks are, if there is anything seriously wrong with his front legs he cannot travel, and so derives no benefit from his good parts. Some horses may be seen whose knees are not straight, others when looked at from in front show that their feet are not in line with their legs. Such animals are more likely to slip or strike one leg with the opposite foot, thus making themselves lame and unable to do any work.

Much depends upon the parentage of the animal. It is never well to mix blood; that is, draft horses, like Percherons, and horses used for fast road work should never be crossed with the object in mind of getting an animal fleet of foot and yet strong in body. Keep the blood pure and always grade up.

There are a great many interesting things about a horse which cannot be told here, but which you may learn at home or from some neighbor who keeps good horses. We will, however, say something about horses' feet. Inside a horse's hoof there are some very sensitive parts resembling the attachment of the finger nail and the finger. When anything gets wrong with the foot these parts cause a great deal of pain, and even though the horse is otherwise perfect, the pain in his feet makes him too lame to travel. Horses with large, wide feet, that are wide across where they touch the ground when you look at them from behind (or in the heels) are not likely to have this trouble.

Even though you have never studied horses you have seen some that impress you as being much more beautiful than others. No matter what kind of work is to be done, it is desirable to have a horse that looks well. Of course, it will depend upon whether the horse is thin or fat and upon the grooming he has had, but you will usually find that the horses which attract you have rather long necks that rise upward from where they leave the body; the head, too, instead of being set on straight up and down, will have the nose pointed a little forward; the ears will be rather close together and the eyes large and bright looking.

PROF. F. R. MARSHALL,
Ohio Experiment Station.

Feeding Horses.

The Kansas Experiment station offers the following good advice relating to hay feeding.

Either heavy or light horses that are doing regular, steady work should not, if one wishes to feed economically, have more than one pound of hay per hundred pounds of live weight. That is, a 1,000 pound horse should receive 10 pounds of hay a day, and a 1,500 pound horse 15 pounds a day. A 1,500 pound horse that is doing steady work should have about four pounds of hay with his morning feed, the same amount at noon, and about double the amount at night. Many horses will eat 30 to 40 pounds of hay a day if they have free access to it. If a horse is allowed to eat such quantities, half of it is wasted, and if he is eating that amount of hay, it is worse than wasted for it does the horse an injury.

From two to two and one-half pounds of digestible protein is all that an ordinary horse can utilize in a day and in 100 pounds of alfalfa there are 11 pounds of digestible protein. This fare of alfalfa, if too heavily fed, is likely to cause kidney disorder, and may even be responsible for abortion in pregnant mares that are fed too liberal a ration of it. If it does not cause abortion, weak, unhealthy foals may be the result.

Sidebones.

All breeders, buyers, and sellers should know what a sidebone is and how it should be detected, says A.S. Alexander, V. S. Stand with the back to the horse's head, lift up the nigh fore foot with the left hand, and with the finger and thumb of the right hand take hold of the side of the cornet (hoofhead) at the heel. At this part there is a ridge of elastic cartilage in sound horses, and it should be possible to bend it from one side to the other.

This is called the "lateral cartilage," and its purpose is to spread the heels apart and distribute concussion so that the leg above is not jarred in a damaging way. When this cartilage has turned to bone it is termed a sidebone, which may be on one or both sides of one or both fore feet.

Standing the other way and running the palm of the hand down over the coronet a marked or large sidebone may be detected as the thumb on one side and the fore finger on the other side meet it as a hard, rigid, bony enlargement. Both methods of detection should be employed in examining a horse, and horses having one or more sidebones should be rejected as unsound.

Lameness is usually present when a sidebone is forming, and when complete it so interferes with action that the animal is straight, stiff and stilty in front and often lame on hard pavements or roads. As sidebones are usually more prone to form on shallow, weak feet or on boxy, mule-like hoofs, they should be most suspected on such feet and animals having a tendency that way should be regarded with suspicion if intended for city work, while stallions should be rejected if there is a sign of sidebone, as the conformation favorable to the appearance of sidebones is at least hereditary and so transmissible to progeny.

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Breast Collar—Single strap.

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POULTRY.

The Difference Between Grit and Shell.

There is a difference of opinion among poultry men about the use of grit and shell—that is, of flint grit and oyster shell. It is a case of grit v. shell, really. The shell-only men are in an insignificant minority, it is true; but as long as the question is left undecided there will be minds uncertain on the point, and the point is one on which there should be certainty.

To see what fowls really did use or prefer, I penned a few, giving them a fair supply of stone and flint-grit and a large supply of broken oyster and other shells. Feeding was as usual for laying stock, a full grain ration being fed every night. At intervals of a months three fowls were killed, and the contents of their gizzards carefully examined. The results showed once more the insane folly of attempting to dictate to Nature, of telling hens what we think they must and should do, and how they should work their internal economy. In no case did we find any flint-grit in a gizzard, and in no case did we find any shell or the appearance of any shell. All the the birds had in their gizzards small, irregular pieces of quartz rock, mostly white, about the size of small peas, such pieces of quartz as you can gather among the gravel on the sea-shore. Quartz is the hard dim-crystal-like stone found among granite rocks. Each gizzard contained a supply of these, and no other kind of hard material of any description. I noticed that the supply of flint-grit in the pen seemed to last a very long time, and I noticed that no birds except the ones in heavy lay ever touched the broken shells, but I scarcely expected to find post-mortem results such as described above.

One of the fowls was an Asiatic of fair breed, the second was an Orpington rather mixed, and the third was a White Minorca. They had clearly rejected the flint for use as grit, and had searched for and deliberately picked up the quartz-rock. It was all white-colored, and one wonders if this had something to do with the matter. Probably not, because the shells were also white in color, and, as far as their use for grit is concerned, they had been entirely rejected. But this had been noted even before a fowl was killed. We saw that, whenever a hen stopped laying, she also stopped taking any shell; she only wanted grit then for grinding purposes, and for this she declined to have shell. There was no cock in the pen, but it was not likely that his presence would have made any difference to the test. If all hard substances suitable for grinding purposes had been kept out of reach of the fowls, excepting broken shell, no doubt they would have used that for grinding purposes as well as for egg making. It would have been a matter of necessity, not of choice. a pen of Wyandottes the other day Fowls are kept in this way. I saw which had nothing but broken shells from the sea shore, and no means of getting any other grit, as they were closely imprisoned and the floor of the run was fine earth. In that yard fowls had been kept in this way for a long time—ten to fifteen years at least. They were said to lay well and be healthy, but as it is impossible to get the facts of the case covering all the consequences and results, this ordering of Nature counts for little. To hear some people talk one would think there was nothing more to learn about poultry. "We know it all," and are simply going "treadmill style round about finality." Talk like that is some evidence of mediocre intelligence and absence of the analytical faculty. In truth, the best man going into the poultry world (do not all shout at once) knows very little about the essential principles of a hen's interior economy. It is unwise to say we have reached finality, and on any question of fowl procedure there are different problems bristling with unsolved difficulties and unanswered questions. At the same time, from the foregoing experiment it seems safe to infer that the use of shell both as shell and as grit is mistaken procedure, and should be stopped. It is evidently contrary to Nature, and in matters of this kind Nature is a very safe guide to follow. Of course, the habit that many ignorant poultry keepers have of mixing in shells with the soft food, and giving the whole mess to the fowls, is a barbarous and totally wrong procedure, and should not be tolerated for an instant in any yard. It is simply blundering stupidity. There is no defence for that. The other style does not seem to have much defence either. Shell alone is evidently not Nature's method of working. There should be two regular supplies of material, given for two totally different and distinct purposes. There should be a supply of grit proper—that is, broken flint or broken stones—solely for the purpose of grinding the fowl's food—i. e., to act as teeth. Then there should be a supply of oyster shells or seashells, or land or fresh water shells, if obtainable, for the purpose of supplying lime to the fowls for making the shell of the egg, and for no other purpose. These two distinct supplies of various material for totally different purposes should always be in the yard, not mixed together, but in two separate boxes, within easy reach of the fowls. In this way the poultry can follow the dictates of Nature, which is pretty certain to make and keep them healthier and happier than if they are forced to obey the dictates of human ignorance and presumption. For success in poultry keeping the old rule must be obeyed—instead of trying to force the hen to do as you want, you must force yourself to do as the hen wants. She knows best.—Feathered Life.

The Egg Eating Habit.

The oft-repeated cry, "Why do our hens eat their eggs?" is common at this time of year. Replies are given by eminent experts generally advising more activity for the hens, variety of rations, oyster shell and grit, dark nests, etc. All these things, of course, are essentials and if never lacking, the habit is seldom, if ever, acquired. Still, why do hens eat eggs? Let us see.

It will be noted that the habit is seldom prevalent among a flock of hens on free range during the summer, and this fact may lead to the theory that close quarters and idleness may be the cause. And indeed it is, in a sense; it is a contributing cause. But a few hens kept in a large stock will learn the habit and, getting only what feed they can dig out of the litter and manure can hardly be called closely confined or idle, and yet it is well known that such hens are amongst the worst offenders. They may be overfat then. This is true, but overfat hens do not lay at all.

Let us next examine the eggshell. During the summer when the hens are on free range, the shell is quite hard and a person feels that he may handle that egg without fear of putting his finger through. But how easy one crushes the shell in the winter! Eggs are even laid without any shell.

The material that makes the shell so hard is lime. It is also one of the hardest materials to feed a hen in sufficient quantity when once she becomes short of it. She won't drink water containing lime, if you scatter it on the floor in the hope that she will pick it up; you will still get soft eggs, if you get any.

There is one method, however, which we discovered some years ago and have never known to fail. Feed it in boiled grain. Just about a tablespoonful to a pail of grain, boiled with the grain, and fed with it, and in one or two weeks you will get eggs with hard shells on and little specks of lime all over the shell and never an egg will be eaten unless some hardened sinner still persists, in which case boil the sinner.

An ounce of prevention is most surely better than a pound of cure, and if you keep your birds active, feed roots, animal food and a little grain and keep a hopper of oyster shells and grit always handy, there will be very little trouble with hens eating eggs. If the shells should get a little thin, a boiled feed with lime once a week is the remedy.

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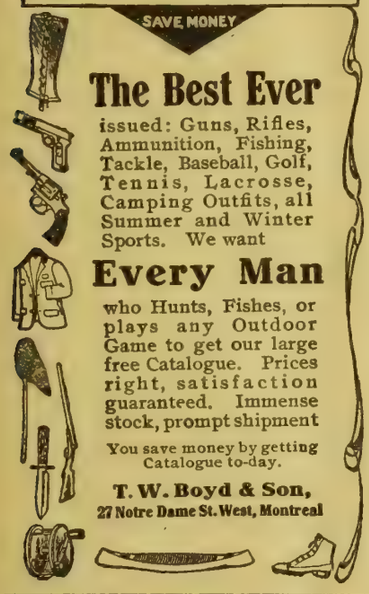

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The Girl Who Smiles.

The wind was east, and the chimney smoked,
And the old brown house seemed dreary;
For nobody smiled and nobody joked,
The young folks grumbled, the old folks croaked,
They had come home chilled and weary.

Then opened the door, and a girl came in:
Oh, she was so homely—very!
Her nose was pug and her cheek was thin.
There wasn't a dimple from brow to chin,
But her smile was bright and cheery.

She spoke not a word of the cold and damp,
Nor yet of the gloom about her;
But she mended the fire and lighted the lamp,
And she put on the place a different stamp,
From that it had had without her.

Her dress—which was something in sober brown,
And with dampness nearly dripping
She changed for a bright, warm, crimson gown,
And she looked so gay when she came down
They forgot the air was nipping.

They forgot that the house was a dull old place,
And smoky from base to rafter,
And gloom departed from every face,
As they felt the charm of her mirthful grace,
And the cheer of her happy laughter.

Oh, give me the girl who will smile and sing,
And make all glad together!
To be plain or fair is a lesser thing,
But a kind unselfish heart will bring,
Good cheer in darkest weather.

Jacassa's Journal.

By Mary W. Janvrin.

(Continued from last issue.)

"Sh! A young lady boards here" I heard Mrs. Hull commence; then the closing of the door precluded my hearing further. But I smiled, for I knew the honest woman would keep her promise of not betraying me; and I resolved to keep my embroidery, and the fruits of my morning rambles in the woods, henceforth in my own room.

Presently, "Miss Jacassy!" came from the foot of the staircase.

I was brushing my hair before the mirror. I took a few geranium-leaves from a vase and placed them in my braids, and, smoothing my muslin wrapper, went down

"Lisha, this is Miss Jacassy Bowen," was the very informal presentation to the tall man who lounged in the rocking-chair by the window.

He rose and advanced with outstretched hand and a well-bred air; but an amused smile hovered on his well-cut lips. "Aunt Sarah seems to have forgotten that her "Lisha," to strangers, shodld be 'Mr. Meredith,' though I trust I may not be long regarded as a stranger by Miss Bowen, whom I am happy to find under the roof of my boyhood's home," he said, politely, and still smiling in a kind of frank way that set me at once at ease.

"La, that's jest like me!" laughed Aunt Sarah. "But no wonder if I talk crossways, for your sudden comin' has upsot my head entirely, 'Lisha!" And, with a beaming face, she retreated to the kitchen.

I do not know that I shall apologize for the 'easy negligence' of my attire, Miss Bowen," said Mr. Meredith, still smiling, and glancing down to his dressing-gown, "though, surely, if Aunt Sarah had told me I were to meet any one and that a lady, I should have retained the professional suit of black."

"Pray, do not give yourself any uneasiness, Mr. Meredith," I replied, "for I, too, am a lover of ease and comfort, and trust that neither professional suits nor airs will be donned at Ryefield on my account. I dislike professions of all sorts, and professionists," I added, half sarcastically, half smilingly.

"You do?" he replied, in the same vein. "You are an anomaly, then, for young ladies usually constitute a large ingredient of the latter-named class, since they are constantly making violent professions of fancy, love, or friendship."

"I never make either," I retorted, glancing up to meet his half curious, half amused air?"

"Ha! you throw down the glove to me?" he laughed. 'I accept it; and if we two are to be located together under the same roof for the fortnight I propose stopping in Ryefield—and my aunt tells me you are passing the summer here—I foresee that we shall either become friends or enemies. My own inclinations would favor the former relation; but perhaps a perverse young lady's taste may be the latter. We shall

And so we fell into unstrained, natural conversation—he the dignified lawyer, and I the literary womaolb this might not have been; or if, under such circumstances, I had said to him what I had -ust saucily uttered, I am sure he wodld have thought me "strong-minded" and anxious for "an argument," and so avoided me. As it was, by the time Amos Hull came from the hay-field to dinner, to welcome "'Lisha" with a hearty shake of his hard, sunbrowned hand, and Aunt Sarah summoned us to the table set out in the long, cool kitchen, we were on excellent talking terms with each other.

At table, I sat, not opposite, but where I could have a good view of Mr. Meredith's side-face without seeming to observe him. He was not handsome—as ladies vote handsome men—for his features were too massive for the type of the Greek Antinous; but his hand was white, muscular, and shapely; there was a warmth and kindliness about his dark gray eyes, a gentle firmness about the well-cut lips, and, altogether a strength and repose about his whole manner which quite accorded with my idea of "a manly man." I never did like exquisites—beg pardon; I forgot Montague Livingstone Wentworth, though that hardly disproves my assertion, since the "I" of now and the "I" of then are two different beings. I do not care if a man be not over-particular in matters of apparel; in fact, to my thinking, the very carelessness with which he arrays himself betokens a mind absorbed in something else than the fopperies of dress which we women associate with "nice young men;" and I was secretly pleased to notice that Mr. Meredith's neck-tie was slightly loose and awry—it was so warm, that sultry July noon.

"Waal, now, Miss Jacassy, this is goin' to be jest the afternoon to be down on the beach," said Mr. Hull. "There's hundreds of carriages gone by this forenoon, and I s'pose the big houses are crowded. She's the greatest gal ye ever see for the salt water, 'Lisha"—turning to Mr. Meredith. "Guess you'll have to take a ride down there with 'Cassy"—this was a way the farmer had of abbreviating my name.

"And so Miss Boweb loves the sea?" said Mr. Meredith, turning to me, quickly. "I am glad of that. She shall ride down with me this very afternoon, that is, provided she will not place an injunction on my wearing this unprofessional dressing-gown!" And his mischievous gaze encountered mine.

"Agreed!" I laughed; "but I would advise you to take along a blanket shawl, in case the cool ocean breezes should blow in from the east, or a sea-spray should rise, damper on your ardor—all which accidents would be very pleasing no or a sudden thunder-shower put a doubt, to Mr. Meredith." m

"Certainly! I love Dame Nature in all her moods, whether she scolds, weeps, smiles, or evelops herself in the foggy mantle of mystery, for each is but a phase of her life. She is very fickle, quite like a woman!"

"Now fretting, now weeping, now smiling, now raising such a din about one's ears that heaven and earth hold no other similitude save the rattling thunder-peal," I laughed. "Flattering comparison that, Mr. Meredith, to us women."

"Yet I think the simile may be a true one," he returned. "There may be some of the latter sort, I doubt not, but—pardon the illustration," he added, courteously—"they are of that virago. strong-minded order whom we instinctively shun."

"Then you dislike 'strong-minded' women?" I asked, demurely.

"I must confess to 'the soft impeachment," he replied, laughingly. "From lecturesses, female physicians, authoresses, and all of that ilk, Heaven forefend me!" And he drew back with a deprecasing gesture. I was puzzled to account for the mischievous twinkle of his eye, but he added, quietly: "You will ride to the sea-shore with me this afternoon, Miss Bowen?"

"Now, that's too hard, 'Lisha!'-began good Farmer Hull, breaking in upon my affirmative answer. "If I were 'Cassy here, I never'd write another word of po—"

"Potatoes, Amos?" quickly interrupted Mrs. Hull, touching his foot under the table, and growing very red in the face, for, in her hurry, she had forgotten to communicate my request to her husband. "These are nice—the largest new potatoes I've seen this year. Chenangoes are the best for plantin', ain't they, Amos?"

I bit my lips, and glanced towards Mr. Meredith, but he seemed perfectly unconscious of the nature of the interruption; and presently, after Aunt Sarah's nice pudding, which he praised immoderately, and a dessert of tempting "black-heart" cherries, we left the table.

And, this evening, the sunset hour found Mr. Meredith and myself driving slowly along the wide, level beach. He guided his horse close to the edge of the breakers and into them to cool his fetlocks. How much I enjoyed it all—the sunset sky, the deep-voiced sea and Mr. Meredith's conservation, betraying such an acquaintance with books, men, manners, and life! When we rode slowly homeward, it was late, and the moon was rising out of the ocean, and the fresh sea-breeze made him glad to fold the blanket shawl over his shoulders, for Mr. Meredith had persisted in wearing the dressing-gown.

I am not weary or sleepy and so I have seated myself, at this late hour to write out this day's events in my journal. How well I know him and yet this morning we had not met!

August 20th.

Nearly four weeks have passed since Mr. Meredith came here, and yet he has not spoken of his departure: I think this quiet and repose in the summer days at Ryefield suit him well—he seems to enjoy everything so much. His partner, he tells me, is at Nahant, with his family, for Mr. Harlow has an invalid wife and two fashionable young-lady daughters. I have heard of them in town as two dashing; accomplished girls and belles. They live in a handsome stone front in P—— Square. Mr. Meredith seems to like to to talk of them—the Misses Harlow—particularly of Kate, the elder, a handsome brunette, who has a great deal of attention in society. I am not jealous. Why should I be? He is nothing to me. I suppose they are engaged, he speaks of her so freely, and I hope they will be happy. I hope she is worthy of him, for I could not bear to hear that, when he marries, his domestic life is not everythiog it should be, he has such a deep earnest nature, and is capable of such fine, tender feelings one would not credit in the keen, active business-man I know the shrewd Cyrus Harlow's partner must be. But in these four weeks' intimacy, seeing him here in the free domestic atmosphere of his boyhood's home, riding, walking, talking with him daily, I have had many revelations of his inner nature. "It makes a man cold, reserved, isolated," he says, "to have no pleasant home-ties, to live among strangers. The friction of the constantly active machinery of business sharpens the intellect, but it wears out the heart. He made this remark the other evening when we were talking. I suppose he will marry Kate Harlow by and by, and, in their elegant, refined home, he will forget his loneliness. His wife should possess a warm, aesthetic nature, like his own.

Well, I will not write longer here. I hear his merry laugh—he has a boyish laugh—from the great barn, where he is helping the men stow away the fragrant hay. Who that saw him up at sunrise this morning, swinging his scythe broadly with the mowers, would imagine him a city lawyer? His hands are browner than they were when ne came here, and his forehead is sunburnt, too. I believe I am brown as a gypsy myself; he said I looked like one, the other day, when he put a splendid crimson cardinal-flower in my black hair, down by the brook-side in the woods. I certainly look and feel far unlike the pale, worn woman who left the stifled city with the early Maytime. I had grown so tired so tired of the shadows of high brick walls that "I go in the sun, now, when I might go in the shade," Mr. Meredith says, " from a pure womanly spirit of opposition." He loses no opportunity to tease me. I wonder why he never asks me in what portion of the city I make my home. That would be only natural; but I really begin to believe—what is often said of our sex—that women possess all the curiosity. I should have asked a hundred questions where he asks none. Perhaps, though, it is because his circle of acquaintancees is circumscribed to the aristocratic limits of P—— Square and he would not want to recognize on return to town, one whose means will not permit a first-class boarding-house. If I thought that—but no I am foolish! That was a puerile and as unworthy myself as him. I

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will be content to enjoy his society here, and let Miss Harlow engross it for all the future.

(Continued in next Issue.)

Keeping House by Machinery.

"To work for work's sake seems to be stupid," said a clever friend of mine, who is withal an excellent housekeeper, and always ready in her leisure time to extend a gracious and easy hospitality to her many friends. "I avail myself of every good, labor saving machine that is offered and consider the money thus spent my best paying investment. Our house is small, and domestic service of a satisfactory sort is difficult to secure, and more difficult to retain. Our vacuum cleaner replaces a housemaid, and our fireless cooker, that works quietly, all day and all night with never a complaint, is so efficient in its department that we scarcely regret the absence of a cook. Our dish-washer has reduced that dreaded task to a minimum, and-Tell it not in Gath!'—we use it only once a day."

A washing machine makes the laundry work go quickly, and our patent drier is so satisfactory that Mrs. Smith, our weekly "help," can accomplish as much in one day at our house as she does in two places where old-fashioned methods prevail. A revolving table that has several shelves and can be wheeled into the pantry, takes care of the dishes removed at the end of each course, for our service is as dainty when we are alone as when a guest is present.

If the housekeeping seems to run automatically it is because mother is a master at reducing things to a system. It takes brains to so plan the running of even the simplest home, that no one hears the cranking of the cogs, and the planning is always for the easiest possible methods consistent with comfort.

In a little closet in a cool corner of the large pantry we keep what we call our "reserved stock" of prepared foods, which can be served at a moment's notice, and thus meet unexpected calls upon our hospitality. Canned soups of the finest grade, in different sizes and styles, French peas and string beans and whole tomatoes, fine sardines and salmon and homemade salad dressing in a jar enable us to concot an appetizing salad. Hawaiian pineapple, which is picked at the moment of perfect ripeness and canned on the spot, we find delicious in sliced form, eaten with a spoon like grape fruit, for this, unlike the ordinary pineapple, has no woody fibre, and in the crushed and grated froms makes dainty ices, creams and desserts. Jellies, Pickles, and jams, peanut butter and potted meats and cheeses are always on hand in this closet.

We buy only the best brands of prepared foods, for we find that though the "United States pure food stamps" protect one from foods that are positively detrimental to health, they do not be any means insure the flavor and deliciousness of the contents. Only the brand of the maker can be relied upon for this, so we test the quality of such goods and stick to the kinds we like, rejecting all "just as good" sorts, which usually prove disappointing.—Reader.

Home Made Rugs.

There are so many uses for rugs about a farm house, particularly since bare floors, or at least carpetless floors are the order of the day that every effort should be made to have a good supply on hand. The new ones are just the thing for bedroom while the old faded ones are well for rainy days in kitchen and on porches. The careful housekeeper knows that it is comparatively easy to spread down an old rug on the porch and another by the kitchen stove, as the men come in and out on cold, wet mornings, and thus save the better rugs and carpets much wear and tear, while as floor coverings in times of butchering, house cleaning and other dirty work they are ideal.

Of all the rugs known to womankind the common rag ones woven in looms are the best. Braided rugs are pretty, but too much trouble for the busy, housekeeper and darned rugs are open to the same objection. Of course, if one has time a prettily matched braided rug or one darned in a frame for the guest chamber is very nice, but most country ladies of the present have no time for such things. In the olden days when there were many daughters in the home, or the daughters of a neighbor was ever ready to lend a hand, wonderful rugs were constructed, but nowadays the pretty hit or miss woven ones are most liked by busy women.

Cotton rags should be cut or torn one inch wide or one and one-quarter inches for a good, smooth rug, while heavy wool goods must be narrower. It is a good plan to keep the cotton rags separate from the others, and the rags separate from the others, and the woolen rugs are best for bedrooms where they will scarcely require washing for years. Sew the rags securely, as the busy weaver will tie any that come apart and thereby make a knot in your rug. Avoid abrupt turns in cutting them, for these turns will also make rough places. Fold the places where you sew them, and make the whole ball smooth and even. Many ladies boast that they can cut an entire garment into one long rag, but aside from the monotony of several inches in a rug of the same color, there are apt to be many rough places when this plan is followed.

Another thing to remember is to have plenty of good, strong carpet warp. It is always better to furnish this yourself and insist that it shall not be saved. A poorly woven rug full of holes is a nuisance and your time and money are thrown away, while a good one will last for years.

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If your grocer does not keep it, send 5c for sample box. Address :

For Sale to the Trade by
MESSRS BAIRD & PETERS, St. John, N. B.

OCEAN MILLS, Mount Royal and Lasalle, - Montreal, Que.

The Sunny Side.

A friend whom I used to meet daily when walking to my work on bright days, after exchanging greetings, would always say, "Come across to the other side of the road where it's sunny." A simple little remark, but it was charastic of her; she chose the sunny side of everything. A person may lack education, know poverty, be very busy, but wherever you find one who looks on the sunny side there you find one who has many friends and is truly helpful. There is hardly a quality which "pulls" so strongly today as cheerfulness.

Undobtedly it is easier for some people to be thus than for others; they are gifted that way by nature, but a bright outlook can be cultivated. Many think cheerfulness means a sort of boisterousness of spirits. This is not so, for often the quietest of folk have the most persistently bright outlook of any.

Probably with all of us work takes up most of our waking hours. We have but few 'leisured folk, whether by reason of preference or by circumstances, in our busy young country. Therefore it is in and through our daily work that we have to discover the sunsshine. The greatest help of all is to do the particular duties which are ours in the best way they can be done; there is keen satisfaction in that. A thorough knowledge of our work is essential to the finding of real pleasure in it. But some will say that it is often hard to find out the best ways, and that they have been forced into doing this or that without proper training or preparation for it. No matter how we are circumstanced, are there not one or two avenues for advancement always open? Observation is perhaps the most important. We cannot help coming into contact with someone who has a different way to ours of doing things, possibly a better way, and there is no patent upon that kind of idea; it's ours to observe, to carry home, to put into practice.

Then reading is a help. From a careful reading of much that is within our reach today we may get one good helpful thought which when used will mean that our work is of just a little higher grade, and that system kept up will make us not only more successful in our special sphere, but will keep edging us over to the sunnier side of life, our greatest incentive to a cheerful outlook coming through our work.

It is quite possible to do splendid work, and take great uleasure out of the doing of it, even though that particular work would never have been our choice. In other words, there is such a thing as an acquired liking for something which is inevitable. "If we can't have what we like, let's like what we have."

There is still something more. Never must we feel we have reached the place where there is nothing left to be learned about our work. That means no room for ambition, no room for growth, no room for thinking, and to be happy the average man or woman needs all three. Work intelligently done not only loses much of its drugery, and brings joy through the satisfaction of knowing that it expresses our best, but it also colors all the remaining hours of the day. There is little pleasure in pastime unless there has been pleasure in work.

And so it comes back to the starting point. Let's look on the sunny side, and be able to do this let's develop, and broaden, and think, and put our best into the humble or the great tasks which may be ours. A sunny outlook on life does not depend upon our circumstances; it depends entirely upon our attitude to our circumstances.

"Our lives are songs; God writes the words,
And we set them to music at pleasure;
And the song grows glad, or sweet, or sad,
As we choose to fashion the measure.
We must write the music, whatever the song,
Whatever its rhyme or metre;
And if it is sad we can make it glad,
Or if sweet, we can make it sweeter."

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton - New Brunswick

Lame shoulder is almost invariably caused by rheumatism of the muscles and yields quickly to the free application of Chamberlain's Liniment. This liniment is not only prompt and effectual, but in no way disagreeable to use. Sold by all dealers.

Chamberlain's Stomach and Liver Tablets will brace up the nerves, banish sick headache, prevent despondency and invigorate the whole system. Sold by all dealers.

HIGHER VALUES

Consider the higher real estate value of well painted buildings, compared with unpainted ones.

Don't postpone painting — every day does its damage and piles up costs for repairs.

Martin-Senour Paint

100% Pure

is the cheapest. Absolutely pure and unadulterated, it wears best, looks better and goes further, gallon for gallon, than any other paint at any price.

If undecided which paint to use, write us today for the name of our dealer nearest you—ask him about the written guarantee that backs every claim we make for our paint—a guarantee that actually protects you.

Don't experiment when certainty costs but a few cents more. There's a *Martin-Senour Paint* for every purpose—for house, barn, windmill, pumps, wagon, carriage, cultivator and plow—paint for wood and paint for iron—the best that skill and money can produce.

If your dealer cannot supply you, notify us and we will gladly direct you to where our paints are to be had.

Decline All Substitutes

Write for illustrated booklet, "Home Beautiful," and interesting color card. Free for the asking.

The Martin-Senour Co.
LIMITED
Montreal
Pioneers Pure Paint

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Wharf at Sackville, N. B.," will be received at this office until 4 00 P. M., on Monday, July 4 1910, for the construction of a Wharf at Sackville, Westmorland County, N B

Plnas, specification and form of contract can be seen and forms of tender obtained at this Department, at the offices of E. T. P. Shewen, Esq., District Engineer, St John, N B; Geoffrey Stead. Esq., District Engineer, Chatham, N. B., and on applicatson to the Postmaster at Sackville, N, B,

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, stating their occupations and places of residences. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, made payable to the order of the Honourable the Minister of Public Works, for two thousand seven hundred dollars ($2.700.00,) which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
NAPOLEON TESSIER,
Department of Public Works,
Ottawa, June 2, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B.

Some Household Hints.

To Clean Woodwork.—To clean greasy marks off of woodwork around the kitchen stove or knobs of doors, wet a cloth with kerosene and rub over them. The same is good for cleaning marble washstands.

Painting the last cellar step white will save many a fall.

Boiling water poured over fish will make the task of cleaning easier, as it causes the scales to curl and they can be scraped off without flying about.

A Pie Hint.—When making pies, if the pans are greased with a little butter, it wil, make the undercrust brown and flakey and prevent the crust from becoming soft. It also makes the pie easier to remove from the pan.

Never use hot water to rinse either hands or utensils after preparing onions, as it seems to set the odor. Cold water in abundance is the best remedy.

Clear Black Coffee will clean black clothes, if diluted with water containing a little ammonia.

Hot grease when spilled on the floor can be easily removed by quickly dashing cold water over it, so as to harden it quickly and prevent it striking in.

Baking Powder Biscuit will be much better if you roll dough thinner than usual and use two cuts instead of one for a biscuit, laying one on top of the other. Made in this way biscuits will break open at once and are daintier.

Washing Machines. — Washing machines are a household necessity and if you have not one the deficiency should be supplied as soon as possible. See that the working parts are kept well oiled, kept free from gummy dirt. If the wringer rollers become stained, clean them with a cloth dipped in coal oil, then wash with soap suds. Loose the rollers before putting the wringer away. Keep a little water in the machine to keep from drying out and becoming leaky.

Twine Holder.—Hang an ordinary tin funnel on a convenient nail in the kitchen, drawing the end of the twine through the end. It is a convenient little device.

Apple Dumplings.

Boiled.—Pare the apples carefully, cut them into quarters and take out the core. Mix together a little butter and brown sugar, take a clove and a small strip of lemon-peel. Put these into about as much butter and sugar as will fill the hollow of the apple when the four quarters have been put together again. Put two quarters together. Put the mixture into the hollow, piling it up. Place the other two quarters on the top, and surround the peeled apple with some suet crust. Tie each dumpling up in a floured cloth and boil for about three-quarters of an hour, or rather longer if the apples are large. Throw them into boiling water. Be sure and take all the core out of the apple.

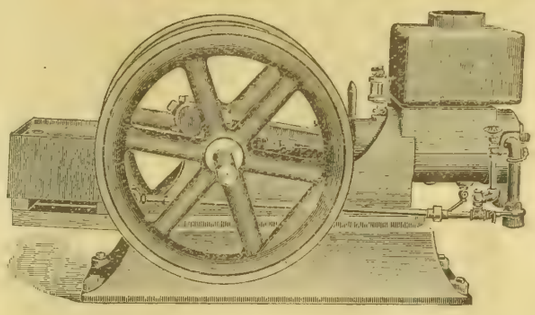
Baked—Proceed as before, but instead of tying them up in a cloth place them in a buttered tin and bake in a moderate oven for about an hour. If the ovens is fierce the crust will get done before the apple is tender.

If you are not satisfied after using according to directions two-thirds of a bottle of Chamberlain's Stomach and Liver Tablets, you can have your money back. The tablets cleanse and invigorate the stomach, improve the digestion, regulate the bowels. Give them a trial and get well. Sold by all dealers.

WE WANT AGENTS RIGHT AWAY!

In every section in the Maritime Provinces where a gasoline Stationary engine can be sold. The one we have to offer, which appeals most to farmers, is the

"Waterloo Boy"



Frost Proof Stationery Engine.

These Waterloo Engines are well and substantially constructed of the best material, by skilled mechanics, and are so durable that the makers have no hesitancy in extending to users their five years' guarantee. Engines are built on the interchangeable plan, all parts being made from jigs and templates, each and every part of the same kind being perfect duplicates, so in future years repairs that may be required can readily be placed without delay.

All the working parts are exposed to view and the duty of each part is readily understood by the user of the engine. The construction of these engines is such that they combine great strength and durability, yet it has been the manufacturers constant study to do away with all extra parts and simplify the construction as much as possible.

If you are looking for a good, reliable and up-to-date gasoline engine to handle—one which sells itself and leaves you a fair margin—write to-day for particulars.

Empire Cream Separator Co.,

Eastern Warehouse—SUSSEX, N B.

Intending Exhibitors Should Send in Their Names at Once!

To the Secretary of the

DOMINION EXHIBITION

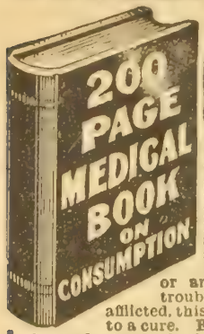
For the First Issue of

The Complete Prize List

Containing all desired information regarding Cattle, Horses, Poultry, Agricultural, Horticultural, Educational and Woman's Work Competitions.

H. J. P. GOOD, Mgr. H. A. PORTER, Sec't'y.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Vonkerman Consumption Remedy Co., 1574 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

FOR SALE.

100,000 apple trees, 75,000 Pears Plums, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agents wanted on vacant territory, selling for fall and spring 1911 delivery.

THOS. W. BOWMAN & SON CO. LTD.
Ridgeville Ontario,

Pleasant View Farm For Sale.

Farm in best fruit section of Annapolis Valley containing 115 acres land. About 40 acres orchard, 2000 trees mostly apples, but includes pears, plums, etc., 1¼ acres raspberries. Good pasture and plenty of wood, fine place for dairying, 3½ miles from Middleton and Wi'mot, 1½ mile from church, ½ mile from school, daily mail, 8 room house, barn room for 10 head cattle and horses, barb wire fencing, soil varies from sandy loam to clay loam with clay subsoil. Reason for selling, owner engaged in other business which requires all of his attention. For price and terms apply to the owner.

EDWIN J. TUCKER,
Spa Springs, N. S

NO BETTER TIME for entering than just Now

St. John's summers are so cool, our position so elevated and our rooms so well ventilated, that we do not find it necessary to take a summer vacation, and we have good classes during the warmest weather.

Also, students can get more attention than in winter, when our rooms are crowded.

Send for catalogue.

THE ST. JOHN Business College.

S. KERR, Principal.

Western Farm Lands For Sale.

In sections, half sections and quarter sections of the best wheat lands in Sask. Wonderful terms to farmers wishing to occupy and work the lands. For particulars and terms write

Clair T. Elderkin.

The Western Real Estate man.
P. O Box 73. Amherst, N. S.

INVENTIONS Thoroughly protected by patent in all countries. EGERTON R. CASE, Registered U. S. Patent Attorney, TEMPLE BUILDING, TORONTO. Booklet on patents and drawing sheet on request.

Mushroom Poisoning.

When one considers the frightful consequences of gathering and eating poisonous mushrooms in mistake for the edible variety, it is little short of marvellous that one without knowledge should dare go into the fields and woods and pick and eat any of the fungi growing there.

If one is throughly familiar with some particular variety of edible mushroom, and can distinguish it at sight from all others, however similar in color and form, it is safe to eat that particular variety; but one must beware of other kinds that resemble it, for however slight the difference in appearance, one may be edible and the other poisonous. There is no absolute rule for distinguishing the edible from the poisonous kinds, and it is better, therefore, to give no general rules, but to follow only one: Suspect every mushroom which you do not know positively to be edible. To this rule, perhaps, may be added a second: Learn to distinguish the white-spored agaricr and avoid them all; for although there is an edible species it requires an expers to tell it, and the poison of another species is deadly, and there is no known antidote for it.

The chief poisons in mushrooms are two in number—muscarin and phallin. The first of these produces symptoms resembling those of alcoholic intoxlcation, followed by convulsions or paralysis, collapse, and death from heart faildre. These symptoms come on soon after the mushrooms have been eaten.

In poisoning by phallin the symptoms do not appear until several hours after the meal. They resemble cholera, beginning with severe abdominal pain, soon followed by vomiting, purging and collapse.

In all cases of mushroom-poisoning vomiting should be induced as soon as possible, and a large dose of castor-oil may be given to hasten the elimination of any as yet unabsorbed portions of the mushroom.

Stimulants are needed to support the heart, and milk containing an abundance of magnesia or bicarbonate of sodium may be given.

Injections of a salt solution into the veins and—in case of muscarin poisoning—hypodermic injections of atropin are often employed by physicians with benefit.—Youth's Companion.

Animal Comfort.

One woman, talking of another who had met with great troubles and was left lonely, remarked that "Mrs. A. has a good appetite, and it is a great pleasure to her." I looked at the speaker curiously, uncomprehendingly. Foolishly I thought that there could be no material compensation in the smallest degree for a blank in the affections. Great trouble was associated in my mind with a sick appetite, and it seemed to my ignorant and constitutional asceticism a vulgarity to pride oneself upon a hearty appreciation of food when one's home was laid desolate.

It was not long after that I heard a family talking of having been in the dumos one week of miserable weather, when there was nothing on to relieve the tedium. After a particularly depressing day, when they had been disappointed of a social outing—"We just said we must have something to comfort us, so I set to work and prepared salmon steak for supper, and we felt cheered up after that." One of my own family looked across at me and said, whimsically, "Why didn't we think of that the other day, when I was tired out and you had a headache, and we felt very flat all evening? Now we know what to do."

I was repeating this story to some other friends, and asking their opinion:—"Do you ever find it comforts you in the various trails and disappointments of life to turn your attention to an extra good meal?" "Of course we do," they replied; "that's our favorite resource when we are hipped and fancy we have cause for feeling that the world is not using us as well as it ought to. We have something extra nice for supper, or perhaps for tea. Earlier in the day the remedy is not so efficacious. The time you require comfort is before you retire to bed, you know." Why, they went on, as if in reply to the enquiry on my face,

Amatite ROOFING NEEDS NO PAINTING.

MOST ready roofings require special painting and coating, and unless this is done regularly, you are sure to have leaks and trouble right along.

If you use Amatite, nothing of the sort is required. You will have real roof protection WITHOUT PAINTING of any kind.

Amatite is made to stay waterproof and give protection year after year, without any thought or care on your part.

FIRST—Because it is waterproofed with Coal Tar Pitch.

SECOND—Because it has a real Mineral Surface.

Amatite, owing to these features, is the most economical roofing made. Its first cost is low, and you are SAVED all future expense for repairs or paint because it will need neither.

If you haven't seen Amatite, write for a sample to-day. From it you will very quickly understand why it doesn't require painting; why it does not leak; and why it saves you money.

Address nearest office to-day.

The Carritte-Paterson Manufacturing Company, Limited,
St. John, N. B., - Halifax, N. S.

Father Morriscy's Liniment Relieves Pain

Rev. Father Morriscy

Aches and pains yield quickly to Father Morriscy's Liniment. It is absorbed quickly by the skin, and penetrates deep into the tissues, making it splendid for sore muscles, stiff joints, rheumatic pains, backache, sore throat or lungs, or any **deep-seated pain.**

It eases at once and heals **surface hurts,** such as cuts, bruises, burns, scalds and frost-bites.

For tooth-ache and ear-ache it is an excellent remedy.

Father Morriscy's Liniment is exceptionally good as a "rub" for athletes. It takes out stiffness and soreness after severe exercise, and never blisters the skin.

Keep a bottle handy, for

"There's ease in every drop".

25c. a bottle—at your dealer's. 111

Father Morriscy Medicine Co., Ltd., - Chatham, N.B.

"you haven't learnt the most elementary law of self-preservation—the preservation of courage in face of the inevitable blows of fate. You try it. Have you never tried it?" After a moment's consideration I confessed that once, years ago, when a calamity fell upon the family, we took to having a cup of tea after dinner, and something tasty to late tea, saying to each other we must keep ourselves up. The peculiar taste of that tea is in my mouth yet—the savour of the terrifying force that lies hidden in the darkness ready to pounce upon us at an unsuspecting moment. After a few weeks, when body and mind began to recover tone we said to each other that we must not yield to self-indulgence, and that the after-dinner cup of tea must be abandoned.

Not long ago I was staying with a family where tea was served after the dinner-cloth had been removed. I rather demurred at this superflous cup, saying that it spoiled my pleasure in the tea which came later. They explained that they started the practice when ——took ill and died, and it had now become necessary to them. Here, I thought, is further illustration that the craving for bodily comfort in times of mental distress is inherent in human nature. It is, of course, a healthy craving. The mind fails if it is not sustained by the body; and if the brain does not send out an imperious command for extra nourishment or stimults, there is danger of the health suffering at those crises in life when it is most needed. The danger of yielding to the appetite for its own sake need not be entered upon here.

The Woman of Many Woes.

There was once a woman named "Sarah Belle," who lived in a small Ontario community, where she was known as the smartest girl in the country school and where she dreamed the ambitious dreams which most Canadian girls know. She finally went away to the city, where, after years of endeavor, some of her dreams came true. Last summer she went home for a long holiday—the first she had known—to the pretty village of Oakdene, where she enjoyed such air and milk and roses as she had not known since she left the old homestead. There were visits innumerable to be paid, and one day Sarah Belle came home with a thoughtful pucker on her forehead.

"What's the matter, Sarah Belle?" asked her mother, who had never been able to discard "Sarah Belle" in favor of "Sadie."

"I'v? been to Cousin Libby's," was the brief reply.

Her mother laughed. "That's enough to make any girl look blue." Libby gets worse every year. What had she to say this time?"

"Oh, she isn't understood."

"That's the worst misfortune of all."

"She says that none of the neighbors sympathize with her or realize what she suffers. It's no wonder that Cousin George died. Her complaints would drive anyone underground.

"Poor George! Libby certainly talks about him as if he had been an angel."

"And when he was alive, he was always being scolded for bringing in mud on his shoes. Really, that woman has given me a headache. She talked her troubles, from the time she saw me coming until I fairly ran away. She seems to have every disorder under the sun, from lumbago to a weak heart. She told me of all the diseases in the neighborhood, until I felt as if there must be deadly germs all over the room. I think women like Cousin Libby should be chloroformed."

Never mind. Go and see Cousin Grace tomorrow, and you'll forget all about Cousin Libby and her woes."

Aren't there too many of the tribe of Cousin Libby—women who retail their troubles for the benefit of their unfortunate friends and acquaintances, and who make the world more gloomy for their presence? They wonder at the close of the day why they are left so lonely, but never seem to conclude that they, themselves, are to blame.

That Tired Feeling.

There is a very common fallacy generally believed, that one hour's sleep before midnight is worth two after it. Healthful sleep is good at any time, and no one set of hours is better than another. Yet, like most of our mistakes, there is a truth about it somewhere, and this truth ought to be seen, but seldom is. It is worth while for every woman who has a family whose best interests hang upon her health and life, to closely study the meaning at the bottom of the mistake.

Most mothers rise at a certain hour, and ho their day's work. Now, if they go out visiting and stay later than their usual hour for retiring they have used up more of their vital force than usual. I have a self-feeding stove. If I neglect it, and it burns low, it takes more coal to fill it. If a mother has been up and about for twenty hours instead of sixteen she is more tired, needs more rest. If she gets up at the usual hour—sleeps six instead of eight hours—she goes to work with lowered vitality, is sooner exhausted and instead of working upon the force stored in every part of her by sleep, she works upon her nerves, upon brain and muscular matter—not the overplus of their energy; and working upon our capital of any sort is the easiest way of going into bankrupscy. More sleep if more tired is the sensible way.

The Fly a Disease Carrier.

The American Civic Association has organized a regular campaign against the house fly. As part of the campaign a series of moving pictures are shown in which the fly, greatly enlarged, is depicted in the act of collecting filth and disease germs and conveying the same into houses and depositing them in sugar and food, scattering them on the baby's milk bottle and laying the foundations in a dozen ways, for sickness and perhaps death.

The fly is undoubtedly a more potent agent for the dissemination of disease than bad water. It lives amid filth,, its legs carry disease germs wherever it moves, and if it passes over food stuffs these germs are left there with consequences to those for whom the food is intended that can be easily imagined. As a means of protection against the fly there should not only be screens in every house but special pains should be taken to have all filth cleaned away from the neighborhood of houses in which people live. Where manure is left about a stable it should be sprinkled with fresh lime or diluted carbolic acid as a means of keeping flies in check.

A Brief for "Beaver" Flour

1. Eat more bread made from BEAVER FLOUR and less meat, and you will be better nourished, at the same time reducing the cost of living.
2. No special pastry flour is needed, for BEAVER FLOUR makes the best pies, cakes, biscuits and rolls.
3. It contains the valuable gluten and proteid constituents of Manitoba No. 1 Hard Wheat, but makes finer, whiter bread than if made from that alone.
4. It owes its delicacy and lightness to the carbo-hydrate constituents of Ontario Wheat in just the right proportions, but is more nourishing than if made from that alone.
5. It readily takes up water, and makes larger loaves and more of them.
6. It tickles the palate of the whole family, and does them good.
7. A few good reasons are as good as a thousand, so we will now, Your Honor, rest our case.

"Beaver" Flour

Be sure to note that the decision is for BEAVER FLOUR,—
with the costs assessed to those who do not use it.

THE T. H. TAYLOR CO. LIMITED, - - 103 - CHATHAM, Ont.

Bickmore's GALL CURE

Be sure and work the horse

The soothing, healing ointment works a speedy cure of *Galls, Cuts, Sores and Wounds*. Standard horse remedy of the world. Cures while you work the horse. Buy it and be ready for emergencies. Sold by dealers generally. Trial sample sent for 2c. postage. Get it and test it. Address

Wingate Chemical Company, Ltd.,
811 Notre Dame St. W., Montreal, Can.

"SILVER PLATE THAT WEARS"

The New House

The silver for the new home will be both handsome and durable if it bears the trade mark

"1847 ROGERS BROS."

Spoons, Forks, Knives, etc., so stamped are recognized by leading jewelers as the best made.

In buying Tea Sets, Bonbon Dishes, etc., ask for the goods of

MERIDEN BRITA CO.

Butter Parchment.

1000	One Pound Printed	$2.35
500	One Pound Printed	$1.50
250	One Pound Printed	$1.10
1000	One Pound Plain	$1.80
500	One Pound Plain	.90
100	One Pound Plain	.19
1000	Two Pound 12x13 Printed	$3.35
500	Two Pound 12x13 Printed	$2.15
1000	Two Pound 12x13 Plain	$2.60
500	Two Pound 12x13 Plain	$1.65
100	Two Pound 12x13 Plain	.35

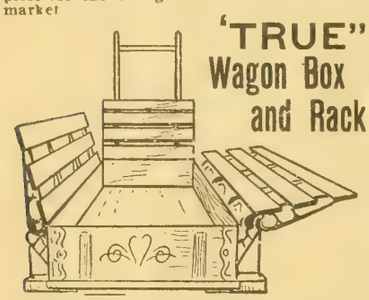
Large Sheets, 24x36 or 24x39, 20 sheets for..... .30

THE MARITIME PUB. CO., LTD.,
Direct Importers, Sussex, N. B.

Up-to-Date Specialties For Farmers And Gardeners.

Things you need—implements and tools that should be on every truck garden and farm. Our way of making these specialties assures adaptability, strength and service at the minimum price for the best goods of their kind on the market

"TRUE" Wagon Box and Rack



Without wings and ladder, it is a perfect wagon box. With them, it is the best Hay, Stock, Wood, Poultry, Corn or Fruit Rack ever invented. Adjusted to any position in a minute without wrench, hook or rope.

"Eureka" Churn

Barrel of finest stoneware—top of clear pressed glass. Churns by hand lever. The only sanitary churn made. 3 sizes—8, 10 and 12 gallons.

"Eureka Root Cutter

will slice or shred from 1 to 2 bushels per minute. Fastest machine made—easiest running. Tapering cylinder—10 best steel knives.

"Eureka" Combination Anvil

Best iron anvil, with vice, pipe vice and drill attachment, and saw clamps. Just what you need for repairing tools and machinery. Weighs 60 pounds.

The "Bacon" Seed Drill

will handle the most delicate seed without bruising or breaking, and will sow evenly to the last seed.

Write for Catalogue

Every farmer, who wants to make money out of his farm, ought to have our new catalogue. It shows our TOOLS, Rakes, Hoes and Machines as they are, and describes their construction in detail Write for free copy.

The Eureka Planter Co., Ltd.
Woodstock, Ont.

FLORICULTURE.

O. A. H., of St. John, writes:—I want to plant some Golden Glow in another place from where I planted it in the spring. They are now about eighteen inches high. Is it safe to try it now or had I better wait until fall? I wish to move them if possible and would like any instructions you can give me.

Ans.—It is, of course, too late to transplant hardy plants, roses or shrubs but in our correspondent's case, who has only such a short distance to move the Golden Glow, it is quite feasible. Make a hole large enough and deep enough to hold all the earth that you can dig up with the plants and dig around the plant with this idea in view. Move as quickly as possible and water thoroughly. Protect from the sun for a few days. Your plants will probably wilt some, even one might say, badly, but if you keep moist and sheltered from the bright sunshine they will come all right.

It is a sight to see Iceland Poppys at this season of the year if planted in masses. How they stand out from among the foliage and with quite a range of color too. They used to be all yellow, but white and red are quite common now.

This week is about the right time to set out all tender annuals such as Mignonette, Petunias, Stocks and the week after is plenty of time for Heliotropes and Tuberous Begonias. By the way, how few persons know what a splendid plant the latter is for shaded spots. This is a very useful piece of knowledge and should be remembered.

Writer, says:—A few weeks ago I planted some Pansies in a bed under a tree; the soil is moist and rich. During the last few days I have seen plants after plants wilted in the morning—the ground is very moist. I can easily pull them up, and if I do not, they turn yellow and dry up. I had the same trouble last year but not so badly. What is the matter? Can I sow any other seed in the place and have plants bloom this year?

Your Pansy beds are infested with the wire worm, a most difficult pest to get rid of. You are apt to lose all your plants and had better not try to grow them in this bed for some years. Soot is a good remedy but quantities sufficient to kill wire worms will usually kill vegetation outright. You better try a new place or bake the soil before planting the Pansies.

The Sweet Rocker which blooms at this time of year is very fragrent and lasts so long when cut in the house that it should be in every garden for an early bloomer as it is also one of the finest bloomers as it branches all up and down the long stalks, and it lives in the ground all winter.

The Beauty of Sympathy.

The woman who desires to please cannot rely on physical beauty alone although the really pleasant woman is never plain. Her power lies in her true sympathy with the troubles and sorrows of others. That sympathy expressed not so much by words, as by a sweet smile of encouragement, and a tenderly spoken word. No sympathetic woman is ever tactless. She never upbraids one whose head is bowed with grief, and never affects to be superior to the little weaknesses which trouble others. What a wonderous power she has! Her very presence encourages and brightens the path to those who come in contact with her. They go to her in all their troubles, for they know they will be understood. And if she cannot show them a way out of their difficulties she will at least cheer them with her sympathy.

Keeps out large Animals—Keeps in the Chickens

We've put strength and stiffness into the PEERLESS JUNIOR Poultry Fence so it can stand the attacks of restless animals from the outside. We have made it close enough so small fowl cannot get through. It is made of much heavier wire than the ordinary poultry fence, well galvanized, therefore much more durable.

Peerless Junior the fence that saves expense

That heavy, No. 9, hard steel wire at top and bottom holds the fence taut and true without the necessity of fence boards and saving more than half the usual number of posts. That means considerable saving to you. Write for our printed matter about PEERLESS Fences. We make fences and gates for every purpose.

BANWELL HOXIE WIRE FENCE CO., Limited
Hamilton, Ont.
Dept. K **Winnipeg, Man.**

Perpetual Youth.

Let Me Tell You How to Regain All Your Old Vim, Vigor and Manly Strength. Be a "Health Belt Man;" Feel Young for Balance of Your Life. Age Doesn't Count if You Have the Vitality.

"I could shout for joy. After years of Weakness and Debility, your Wonderful Health Belt cured me. I am a man again. Use my name as you see fit."

Leon Turpinat,
Stellarton, N. S.

Perpetual youth. That is precisely what I mean. I say as man to man give my Health Belt a reasonable chance and it will carry you through any business, mental or physical strain you may be under. It doesn't stimulate; it simply adds the electro-tonic element to your bone, nerves, tissue and blood; all the force and strength which has been drained from your system by some earlier indiscretion. My Health Belt is essentially a strength giver. It overcomes the private symptoms of weakness in men which sap the vitality. If you are nervous and lack manly vigor, you are passing away thousands of brain cells every day. Ask your physicians if this is not true. I stop this awful weakening process. You wear my Health Belt nights; while sleeping a great stream of soft electricity passes into your body at the small of the back; it cures backache in one application; you feel better immediately; inside of an hour; two months will make a new man of you. No drugs; no privations; no restrictions except that you must give up all dissipation. Follow my advice and I promise you will feel younger and look younger. Let me restore your vitality, and you will be able to face the world with new ambitions. The Health Belt cures other ailments too. A positive remedy for rheumatism in any part of the body, sciatica, lumbago, kidney, liver, stomach disorders.

Special attachments furnished, and worn by women as well as men.

FREE UNTIL CURED.

Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash if you prefer to deal that way.

Let Me Send You These Two Books FREE.

They fully describe my Health Belt and contain much valuable information One is called "Health in Nature" and deals with various ailments common to both men and women. The other, "Strength, the Glory of Man," is a private treatise for men only. Both sent upon application, free, sealed, by mail.

If in or near this City, take the time to drop in at my office that you may see, examine and try the Belt. No charge for professional advice either at my office or by mail. If you cannot call, fill in the coupon and get the free booklets by return mail. They are better than a fortune for any one needing new vigor.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs—Please forward me your book as advertised.

NAME.....

ADDRESS.....

Make Them Sound

A lame horse is a dead loss. Spavin, Curb, Splint, Ringbone, Swollen Joints and Bony Growths won't cure themselves. Yet you can cure these troubles and make your lame horse sound with

Kendall's Spavin Cure

just as thousands have done, and are doing today.

In the 40 years that this world's famous remedy has been on the market, Kendall's Spavin Cure has saved millions of dollars to horse owners.

Mounds, P.O., Olds, Alta.

"I have used Kendall's Spavin Cure for a number of years with great success, and I think it can't be beaten as an all-around stable liniment for Kicks, Strains, Swelling of all kinds, Ringbone and Spavin".

ARTHUR FLETCHER.

No telling when you will need it. Get a bottle now—$1—6 for $5.

Our book—"A Treatise On The Horse"—free at your druggists or write us 49

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

Some Factors in the Control of Moisture in Orchard Soils.

(Continued from page 591.)

6. Rape has proven an excellent cover crop for drying out the soil in the late Summer an Autumn months. In this respect it is fully the equal of the legumes usually sown for this purpose.

In conclusion, we may emphasize the essential points we have endeavored to bring out ' First, very great value of cultivation for conserving soil moisture and she desirability of means during the first three months of the growing season, to supply our orchards with the water necessary employing in many districts this for the full development of their fruit. Secondly, we have proved the extremely exhaustive effect on soil moisture of sod and of grain crops. Their injurious influence on the growth of the tree—especially the young tree—and the development of fruit, so often to be observed on dry soils, is fully accounted for by the results of our investigation. And lastly, that legumes and rape are suitable crops in most districts to sow in mid-Summer when the drying out of the soil is considered desirable to hasten the ripening of the wood before Winter sets in.—F. T. Shurt, Ottawa.

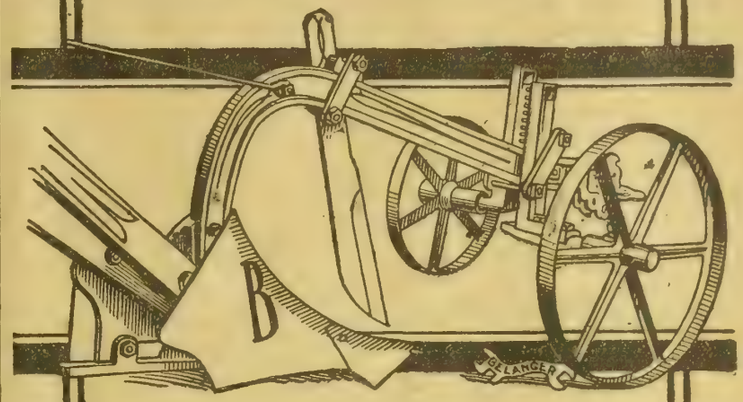
Farm Problems.

Enteritis.

J. H. S. Tantallion, N. S. Ques.—Being a reader of your valuable paper for some time I would like to ask a few questions regarding a sick horse I once had. She was bothered with worms and a friend advised me to give her turpentine in raw oil. I gave her four ounces of turpentine, after which she passed a lot of worms but got wet a few days after. I drove her to town a distance of 20 miles. On the return trip she took sick about nine miles from home. When pain would take her she would go so fast I could hardly hold her. If I would stop her she would lie down. Being a lonely road there was no place where I could give her some medicine. When I got home, before I could get the harness off her she laid down and got up about ten times, as fast as she could. I gave her soda, 10 ounces, ginger, 2 ounces and new milk 1 pint. Then I gave her an injection and when her bowels moved she appeared to be eased. Then she would try to urinate but could not. I gave her 1 ounce of nitre and continued the dose 90 minutes later. Then I gave her white resin, one hour after, 1 ounce, then 90 minures after 1½ ounces. One hour after she urinated. Her sickness lasted from Saturday 4 p.m. until Sunday at 3.30 a.m. She seemed better Sunday. She was worse Monday, continually getting up and laying down. Tuesday and Wednesday she remained the same and Thursday she would eat a little. Friday, she ate considerable of hay and a little bran. During Tuesday and Wednesday her offal was mixed with something that looked like matter. On Saturday she became worse and would try to urinate but could pass only about one ounce at a time. She was in great pain and would stand in her stall, shake her head, paw, lay down, get up and kept on in this manner until 6 o'clock p.m. Saturday, seven days from date of sickness. At ten p.m. she laid down and half an hour later she died. I opened her and found that her internal parts were badly swollen and full of water. All around there were clots of blood and her bladder was bursted. How long could a horse live with a bursted bladder? State cause of disease, name of disease and cure for disease if possible.

Ans.—The disease, at first, was probably colic followed ny Muco Enteritis, (inflammation of the inner coat of the bowels) followedby Enteritis (inflammation of the several coats of the bowels) and that followed by mortification of a portion (perhaps large) of the bowels, Mortification being the immediate cause of death. The disease, at first was probably caused by the excessive dose of oil of Turpentine which is an irritant when applied to a horses skin or mucous membrane, which is a membrane lining the digestive track, from the mouth to the anus and continuous with the skin Probably the irritable condition was aggravated by the wetting and after treatment as from two to four drams is an advisable dose of Bicarbonate of Sodium and half that quantity of Carbonate of Sodium is a dose. A dose of Ginger is from four drams to an ounce. In this case twice the quantity was given. Good treatment after the animal was attacked by the disease would have been to place the animal blanketed comfortably in a comfortable, well bedded box stall and given about one dram of Powdered Opium, four drams of Fluid Extract of Belladonna and twelve ounces of raw linseed oil,, mixed as a drench, and if the pain continued for an hour and a half repeat the drench only giving half the above quantities of drugs. An injection of warm water with a small quantity of soap dissolved in it; followed by giving the abdomen a brisk hand rubbing, would be beneficial. After the pain subsided small wheat bran mashes might be given until the bowels were acting naturally, then gradually increasing the food until fully recovered. Water should be given in small quantities, frequently, at first with the chill taken off. Regarding the the urinary condition, the retention of urine was due to contraction of the muscles around the neck of the bladder and is nearly always the condition during an attack of Spasmodic Colic As soon as the spasm is relieved the animal urinates, causing casual observers to suppose that the kidneys or bladder is the seat of the disease. As to rupture of the bladder, is must have occured some days after the commencement of disease or else

YOU DON'T NEED A SULKY PLOW—GET THIS TRUCK.

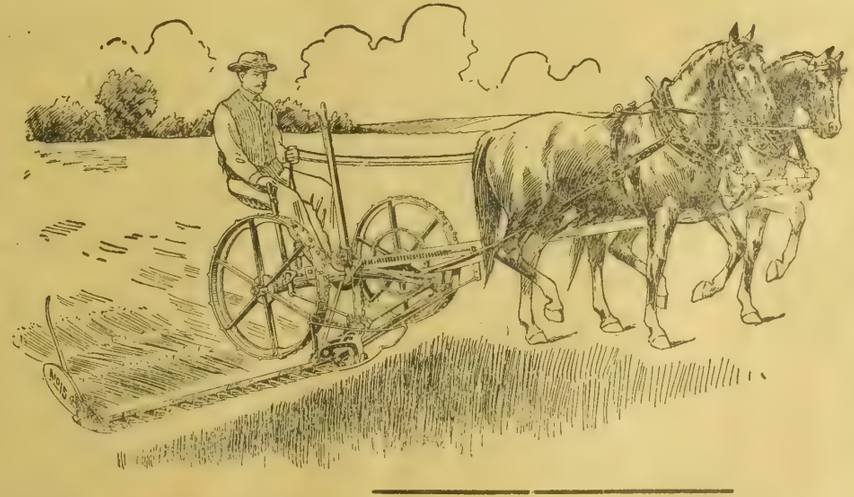


THIS truck under the beam makes an ordinary plow as solid as a sulky—takes the strain off the plowman's arms—makes it almost unnecessary to hold the handles—keeps the plow working at an even depth—makes the draught easier and more regular on the horses—makes it possible for a boy to plow as well as a man could. Anyone can put this truck on ANY plow in 5 minutes—you don't need to have one of our celebrated "B" plows to work it. The large 18-inch wheel runs in the furrow, regulating the furrow thickness and width; the small 12-inch wheel supports the plow when the plowing is too deep and the plow has a tendency to overthrow.

Remember, $5.00 will put this truck on YOUR plow—isn't that cheaper than a sulky? What's more, that price includes free delivery anywhere in Ontario, Quebec or the Maritime Provinces. Write to us for Catalogue No. 100 5

A. BELANGER Established since 1867 at MONTMAGNY Que

Massey-Harris Mower.



Large, broad-faced Drive Wheels.

Four-powl Ratchets—no lost motion.

Finger Bar and Knife back are finest rolled steel.

Long wearing Plates on cutter bar.

Steel Clips hold knife in position.

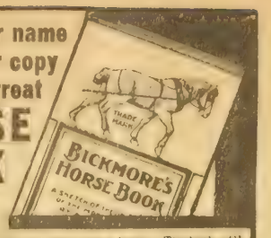
Sections have hard edge and soft centre.

Raised Ledger Plates give long cutting edges—the serrated edges add greatly to the cutting efficiency.

THE MASSEY-HARRIS CO., Limited, Moncton, N. B.

Send your name to-day for copy of this great

HORSE BOOK FREE



You want to know all about your horse. The book will post you. Breed, breeding, development, marketing, handling, treatment of diseases and ailments. A practical book that every farmer and horse owner should have. We want to send you a copy. Simply write and ask for it. We pay the postage. You will find it worth many dollars to you. In it Bickmore tells you how the old reliable stable remedy, Bickmore's Gall Cure, enables you to cure galls, cuts, sores, scratches and all of horses' worst ills and ailments while you continue to work the horse. Never necessary to lay the horse off.

BICKMORE'S GALL CURE

is guaranteed to cure while horse is under harness or saddle. The great action of Gall Cure—who sell it are authorized to return your money if it fails. Buy it and have it on your stable shelf ready for emergencies. It is the standard remedy of leading horsemen, trainers, large stable owners and veterinarians. Sample Bickmore's Gall Cure sent for 6c postage. Address

WINGATE CHEMICAL CO., Ltd., Canadian Distributors,
810 Notre Dame St. W., Montreal, Canada.

the animal would have been unable to urinate at frequent periods up to the 7th day. If the bladder had been ruptured to any great extent the urine would have escaped into the abdominal cavity and not passed out through the natural channel. The quantity of blood and water described as being in the abdominal cavity is always the post mortem condition in death from mortification of the bowels. The length of time a horse would live after rupture of the bladder is not known, the condition being so rare that reliable authorities do not state, and I never saw a case in a horse where death was due to this cause. The fact that the animal stretched as if trying to urinace is not always evidence of a bursted bladder, as horses will often act in that manner during an attack of constipation or colic, even placing their nose at the flank and moving it up toward the lions and moving it down to the flank when the kidneys and bladder are perfectly healthy. Such symptoms alone do not indicate disease of the urinary apparatus. J. STANDISH, V. S.

The life of Geneseo is much like that of other small western New New York towns, and it was recently decided to see if something could be done to develop more local interest in trade. A number of the merchants in Geneseo decided to combine and form a business men's association to advertise the town and help thecommunity.

A large number of the men decided that the thing to do was to arrange some method for bringing the people to town. It was decided, therefore, to try holding a free auction each month. Any farmer could send in anything he desired to sell, and the business men wokld advertise it, catalogue it, pay for an auctioneer to sell it and turn over the proceeds without any expense to the farmer.

At this time the different merchants arranged special prices on certain lines of goods, thus : seven cakes of soap 25 cents, or 19 pounds of sugar for $1.00. One enterprising jeweler on the first public auction day sold 500 solid silver thimbles at 17 cents each. As this auction was held before Christmas, he had all his Christmas stock arrayed around the store with special prices marked on each article.

The public auctions kept the farmers busy, horses, cows, tools and farm products attracted several hundred men. People who would not come to town for any reason came on market day, and those who did not come to purchase, came to discuss things and see what was going on.

The first market day was a decided success. The cost to the merchants was made up by a levy of $1. each on the members of the association. It has since been decided that they will contribute $1. each month and try the system for a year. The

For Family Use

TRY

"McLEOD'S SPECIAL"

OR

"OUR CHIEF,"

Both high grade Ontario patents

Better than any other FOUR on the market.

Your Grocer can supply it.

The

McLeod Milling Co., Ltd.

STRATFORD, - ONTARIO.

For Our SUBSCRIBERS

DO YOU WANT

A Bicycle
A Gold Watch
A Gramaphone
A beautiful Motor Boat
A $400 Piano
An Automobile
A Cream Separator
A $250 Suite of Furniture
A free trip to Rome and the continent
And other Valuable Prizes ?

Watch for the announcement in our next issue of the

$10,000 Prize Voting Contest

which the MARITIME FARMER is conducting in conjunction with The Halifax Herald and The Halifax Evening Mail

Full particulars will also be published in The Halifax Herald and The Evening Mail on about July 5th.
All MARITIME FARMER subscribers will receive sample copies of that date
The full particulars will appear in the next issue of the MARITIME FARMER.

DIAMOND ◈ BRAND

8.00 FOR 100 LBS.

DELIVERED TO YOUR NEAREST RAILROAD STATION IN ONTARIO

THE QUALITY IS AS GOOD AS THE BEST

There is nothing better made—It matters not where you buy it or what you pay for it. Diamond ◈ Brand is made from first quality Manilla and the choicest long fibre sizal, by one of the best manufacturers in America. It is of uniform evenness, smoothness and strength; will test 135 lbs., and is proof against destruction by insects of all kinds. Every ball weighs full 5 lbs., and they are put up in 50-lb. bales covered with canvas and lashed with 22 feet of good laid rope.

MANILLA BINDER TWINE

8.50 FOR 100 LBS.

DELIVERED TO YOUR NEAREST RAILROAD STATION IN QUEBEC OR MARITIME PROVINCES

OUR GUARANTEE ABSOLUTELY PROTECTS YOU

Try our Binder Twine, and if it doesn't fill every requirement perfectly, if you are not satisfied with it in every way, or if you do not consider it the best binder twine value you ever obtained in your life, send it back to us at once, and we will refund your money in full and pay all transportation charges. Furthermore, we will not charge you one cent for the ball you used while making the test. Send us your order to-day.

FARM IMPLEMENTS LISTED IN OUR GENERAL CATALOGUE

THE T. EATON Co LIMITED
TORONTO CANADA

TAKE ADVANTAGE OF THIS WONDERFUL VALUE TO-DAY

second auction in January was held under unfavorably climate conditions, but was extremely profitable to the merchants and some $3000 worth of farm stock was sold, nearly double that sold at the first auction.

SEED SELLING A SUCCESS.

At the third auction, that of February, recently held, it was decided to add a new feature. Three weeks before the event, notice was sent to all the country papers that a seed distribution bureau would be established by the association. A committee outlined the following plan :

All farmers having farm seeds anywhere in the vicinity were invited to send samples with the amounts they wished to sell and the price. In the case of seed corn, they could bring ten ears, or half a peck shelled, half a peck of oats or beans and ten potatoes; also samples of grass, clovers and alfalfa seeds.

First, second and third prize cards were awarded in each class, the judging being done by Dr. Gilbert of the state college of agriculture at Ithaca. The act of placing samples in competition added interest.

Since the auction was not to be until after dinner, the morning was devoted to an institute, Dr. Gilbert giving an address on the importance of good seed. This allowed time to discuss the samples shown and to give in detail methods for their improvement. The exhibit and address were held in the village hall. On a bulletin board were posted the names of all people having produce to sell and of any person who wanted to buy, and the committee sought to bring the parties together.

In order that the farmers might see whether their soil conditions were similar, a soil map of Livingston county was hung up in the room, an advanced copy having just been received from the United States department of agriculture.—Orange Judd Farmer.

STOCK NOTES.

The New World's Butser Record For Thirty Days.—Chenango county, New York, now has the distinguished honor of producing the best cow the world has ever known, and comparatively few realize what that really means. For many years there has been great rivalry among farmers and dairymen as to who could or would at some future date have the proud distinction of owning a world's record animal.

The real name of this queen of all cows is DeKol Queen La Polka 2d, and her fortunate owner is Clayton Sisson of Sherburne, New York, a village just 12 miles north of Norwich. Mr. Sisson lives just about a mile south of the village so that if one cared to drive to his farm it would mean about 11 miles from the county seat. All of Mr. Sisson's herd are of the Holstein-Friesian breed and all his stock is registered. He has been breeding Holsteins for about five years and this animal he purchased from a neighbor sometime ago paying the sum of $175 for her.

The record made by this marvelous cow is as follows :

Butter record, seven days, was 35.34 lbs.

Butter record, 30 days, was 145.10 lbs.

Milk record, one day, was 124.00 lbs.

Milk record, eight days, was 841.8 lbs.

Milk record, 30 days was 3376.9 lbs.

Just reflect for a moment what this means—more than a ton and a half of milk from one cow in 30 days. There is only one cow in the wide world that has ever beaten any of the above records and that animal was Grace Fayne 2d's Homestead, owned by H. A. Moyer of Syracuse. She made 35.55 lbs of butter in seven days. Mr. Moyer was offered just $8,000 for this cow right after the test was made and in two weeks from that day the animal was dead, having contracted pneumonia.

The cow that has tested nearest the Sherburne animal is Colantha 4th's Johanna, and is owned by Mr. Gillett of Wisconsin. Her record is as follows :

Butter record, seven days, was 35.22 lbs.

Butter record, 30 days, was 138.54 lbs.

Butter record, one year, was 1248 lbs.

Milk recorp, 30 days, was 2,677.5 lbs.

Mr. Gillet was offered for this cow and her male calf the sum of $15,000, by D. W. Field of Montello, Mass., but the offer was refused.

The cow that previously held the highest one day's milk record was DdKol Creamelle, and she produced in one day just 119 lbs. of milk, but her butter record for seven days was only 28 lbs. She was owned by D. W. Field of Montello, Mass. When one stops to reflect that the average dairy cow in the state of New York, according to statistics gives only 3,000 lbs. of milk annually it seems this Chenango county cow has produced more than that quantity in 30 almost impossible to conceive that days. Stating it in another way, this Sherburne cow has given 124 lbs. of milk in one day, or 62 quarts. She gave 3,300 lbs, in 30 days, or 1,650 quarts. She is milked four times daily, at 5 and 11 o'clock. Mr. Sisson invites those interested to call and see the animal, but she can only be seen at the milking or feeding hours, as at all other times she must have her rest undisturbed.

DeKol Queen La Polka 2d is the proud dam of a male calf that is practically worth its weight in gold. This handsome fellow is four weeks old and a reporter heard Mr. Sisson offered $2,500 for the youngster Friday afternoon, but the offer was courteously declined. Although he did not so state at the time it is doubtful if any sum under $5,000 would tempt him to part with this promising youngster. He asks $10,000 for the cow and will pzobably get his price before many days have rolled away. She is six years old and for a part of the time while undergoing the tests was not in the best of physical condition. During

"Too Late—The Washing's Done. You Have Missed All The Fun"

The "NEW CENTURY" takes all the work out of wash-day.

It makes wash-day, the easiest day of the week to the woman who does her own work.

The "NEW CENTURY" —with its ball bearings, powerful spiral springs and easy action—enables even a child to wash a tubful of clothes in five minutes.

Why don't YOU learn more about the no-work way of washing at home? Our booklets tell the whole story. Write for them.

CUMMER-DOWSWELL LIMITED, Hamilton.

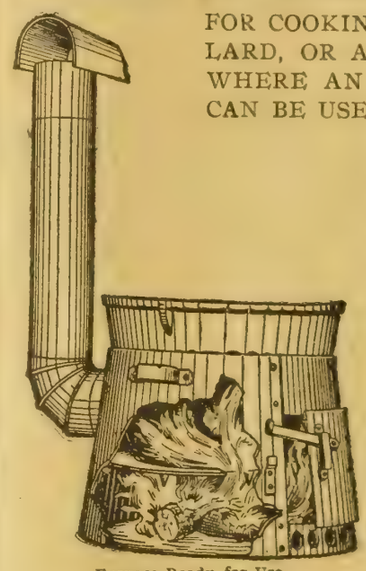
Something New

Ruhmann's Patent Portable Furnaces

USED BY

Farmers, Stockmen, Butchers, etc.

FOR COOKING FOOD, RENDERING LARD, OR ANY OTHER PURPOSE WHERE AN ORDINARY KETTLE CAN BE USED.



Furnace Ready for Use.

The Flue Wing of Ruhmann's is adjustable up against the kettle to contract all the heat around the kettle before passing out of smoke pipe. We make this Furnace of heavy Sheet Steel with Cast Iron Pot, for wood fuel. It has no bottom, as the stove is intended to be used on the ground. The Furnace is a great saving in fuel and labor and protection against fire.

Made in five sizes, at the following prices, viz :

		Pot only.	Stove only.
No. 20 complete	$15.00	$ 6.44	$ 8.56
No. 25 complete	16.53	7.31	9.22
No. 30 complete	18.65	8.78	9.87
No. 40 complete	22.23	11.70	10.53
No. 50 complete	29.03	17.84	11.19

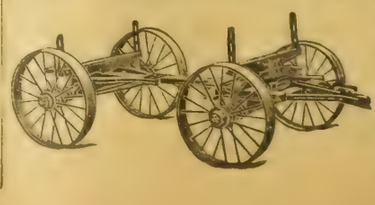
Above prices subject to a liberal discount.

Record Foundry & Machine Co.,

Moncton, N. B., Montreal, Que., Toronto, Ont., Winnipeg, Man., Vancouver, B. C.

Save Your Blacksmith Bills.

Get more work and wear out of your wagon. Dominion Wagons are strongest, lightest, best material. Outlive 3 wooden ones, cost less. Do twice the work. Save time, money, labor. Easiest on horses. None so good. Change to platform pattern in few minutes. Equip your wagon with Dominion Wide Tire Steel Wheels instead of wood. Cold won't snap them. Easiest for rocky or muddy roads. Fit all axles. Cheapest, sturdiest. Send for catalog. No charge. Write now.



Dominion Wrought Iron Wheel Co., Ltd., Orillia, - - - Ont.

the test the animal was in what is known as an old-fashioned rigid stanchion and not in any one day did she consume more than 20 lbs. of grain.

The committee has decided to offer the above premiums in 1910 at Brockton Fair, Massachusetts; Illinois State Fair, Kentucky State Fair, Michigan State Fair, Minnesota State Fair, New York State Fair, Ohio State Fair, Oregon State Fair, Tennessee State Fair, Texas State Fair, Vermont State Fair, Virginia State Fair, Wisconsin State Fair and the National Jersey Show, Shelbyville, Ky.

Class 3.—Cow having an accepted record in authenticated test for one year; made according to the rules of the Club, which is awarded the highest number of counts, on the basis of 100 for perfect, by the official judge at such show, by adding to the counts allowed for conformation one count for each 20 pounds of butter-fat produced by the cow in one year over and above the minimum required at her age, no cow scored on conformation under 80 p.c., to receive an award. First, $30; second, $20; third, $10.

Class 4.—Four females over one year, the get of one sire, three of which must be in milk, exhibited by the breeder. First, $40; second, $30; third, $20.

Animals eligible to compete for these prizes must be recorded in the Herd Register of the American Jersey Cattle Club, and Certificates of such registration must be exhibited to the proper officers at fairs before such animals are entered.

Special Fair Premiums of the American Jersey Cattle Club.—At a meeting of the Board of Directors of the American Jersey Cattle Club held March 23, 1910, a committee of three was appointed, consisting of G. W. Sisson, Jr., chairman; M. D. Munn and T. F. Marston, to arrange for premiums to be offered for Jersey cattle at fairs.

This committee has formulated the classifications and awards stated below, to be offered by the Club at such fairs as the commitzee may designate:

Class 1.—Grand Champion Bull, exhibited by breeder. Gold medal (value, $20), suitably inscribed.

Class 2.—Grand Champion Female, exhibited by her breeder. Gold medal (value, $20), suitably inscribed.

Gavin Harding, Graham's Road, P. E. Island, took a half car of Holstein cattle from Ontario. The bunch included some of the best Holstein blood available in Canada. One heifer, the daughter of the celebrated Count Mercena Posch, having an official record of over 16 lbs of butter in seven days. All the females that had freshened were officially tested and the young stock are from high producing dams.

The PUBLISHER'S DESK.

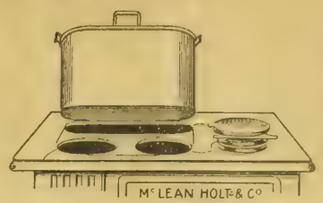
Golden Business' Opportunities.—"Golden Business Opportunities" is the title of one of the Grand Trunk's latest publications, issued by the Commissioner of Industries. It is a concise treatise on business openings in Western Canada, and contains a fund of facts and valuable information. A "Quarterly Bulletin" has also been issued, which tells of specific business openings in Western Canada for the cobbler or coal dealer, liveryman or laundry man, baker or banker, lawyer, doctor or general merchant. These publications may be had for the asking. Apply to J. Quinlan, D. P. A., Montreal, Que.

If You Want to Save Trouble on Wash Days, Then Buy a GLENWOOD RANGE.

Yes, when you have a Glenwood Range in your home, you can shift your wash boiler to the back of the stove by shifting the centres, as the cut shows. The Glenwood Ranges have been proven a success by the hundreds that are using them.

This cut shows section before changing.

We are getting enquiries for them all over the Maritime Provinces, which shows that the Glenwood Ranges are taking a hold through the provinces as well as in St. John, where they are made. We have the stoves that the people want and we neither spare time or money to make them just what we say they are.



This cut after changing.

We prepay all freight to your station. Send for our Catalogue. We have Ranges from $25.00 up.

MADE AND SOLD BY

McLEAN-HOLT & CO., - 155 Union St., - ST. JOHN, N. B.

Buying a Farm Wagon.—If there is any one farm necessity that requires more careful buying than the others—it is the wagon. You must be absolutely sure to get a good one, for it probably works harder, is put to more strain and is expected to last longer than any other farm necessity. So buying a farm wagon is a mighty important proposition with the average farmer, and a few words of advice here will not come amiss.

In the first place, don't let any low-priced wagon blind you to quality. If you can get a first grade, high quality wagon for a "ridiculously low price"—all well and good, but we doubt whether you will be satisfied with your purchase at the end of a year if you let price be your main guide to a choice. If you buy a poor wagon at any price, you pay dearly for it in the end. The real cost of a wagon is its repairs, the trouble and the wasted time it would surely have cost you with a poor wagon. Then there's a certain "pride of ownership," a certain keen satisfaction in owning a wagon you know will stand up under heavy loads, over rough roads, for long trips at a stretch. That sense of confidence costs you nothing when you buy a good wagon.

We repeat, don't let pride be your only consideration when you buy a wagon. Look to the quality first. Find out how it is made, what it is made of and by whom. The only way to get a good wagon is to investigate thoroughly before you decide. Paint, you know, makes wagons look somewhat alike when they are new—so don't judge by looks, either. Of course, you want a neat wagon—but neatness doesn't carry heavy loads, doesn't make a wagon light in draft, doesn't make a wagon last longer and doesn't show much after your wagon has weathered one or two long trips. So, after all, it's what's under the paint that counts. Let us consider the representative line of high Grade I. H. C. wagons, to impress our point more forcibly.

There's the Petrolia and Chatham Wagons that have built up their reputation because the materials used in their construction and the workmanship are of the best. Chatham wagons have hard maple axles, white oak rims, spokes and hubs, second growth white ash trees and yokes, oak or rock elm double trees and reach and white ash or oak tongues. This material is uried under cover and carefully inspected. As soon as the machine work is done on all the gearing, each part is soaked in boiled linseed oil so that every gear, mortise and tenon is properly protected. The wheels are given the same treatment before the tires are put on. The value of this construction has been proven by thousands of Canadian farmers.

Patrolia wagons have also proved an investment that pays big dividends in a lifetimes service to thousands of Canadian farmers. Their record is positive proof that it pays to buy a wagon whose wood material is selected with great care and thoroughly seasoned— whose iron work is designed to insure durability and strength and whose construction is in the hands of expert workmen. These wagons are in every way up to the I. H. C. standard of excellence. The many styles of I. H. C. wagon means the right choice to meet your requirements. Let the local International dealer tell you about the I. H. C. wagon that will suit you best. Get catalogues from him and read the many things that go towards making I. H. C. wagons so high in quality—so satisfactory in use. If you prefer, write direct to the International Harvester Company of America, at nearest branch house for the catalogues you are interested in and for any definite information. A postal card will do. Branches are located at Hamilton, Ont.; London, Ont.; Ottawa, Que., and St. John, N. B.

A Book Worth Reading Twice.—Books issued as an advertisement are often handsome and sometimes interesting. Rarely, though, are they both at once in any such degree as is the latest product of The Pedlar People of Oshawa, those "advertisers in plain English" with whose straight talks most of our readers are familiar. This progressive house has just issued a new edition of their famous booklet "Roofing Right," which is elaborately illustrated from actual photographs of farm buildings in all parts of the Dominion that have been roofed with Oshawa Shingles to the satisfaction of their owners and occupants.

The new "Roofing Right" contains forty-eight pages, magizine size, and is as complete a treatise of the merits and faults of all kinds of roofing materials as has probably ever been put between covers. When one had read it through there is little left to guess at on the question of roofing. The book is written in a frank, plain spoken way and must prove valuable to anyone interested in the choice of roofing for any building. We learn that the Pedlar People have a few copies remaining of the large edition recently printed, and we suggest to our readers the wisdom of applying at once for this valuable work, which is sent free and postpaid on request to any subscriber of this paper who mentions it when making his request. When writing ask for Booklet No. 17.

A Real Mineral Surfaced Roofing.—The new mineral surfaced type of roofings is one of the latest and best of labor saving devices for the farmer. The old type of so-called "rubber roofings" were inexpensive and easy to lay, and became very popular on that account. But they required painting every two years or so to keep them from leaking. Amatite Ready Roofing, which is the most popular of the mineral surfaced roofings needs no painting or coating of any kind. After it is laid the farmer can leave it strictly alone, and it will continue to give him uninterrupted satisfactory service year after year. A sample of Amatite showing the real mineral surface can be secured without cost by addressing a post card to the nearest office of The Carritte Paterson Mfg., Co., St. John, N. B., and Halifax, N. S.

How To Save Money Buying Wire Fences.—To Mr. E. L. Dyer, Manager, of the Crown Fence Supply Co., 47 Wellington St. East, Toronto is due the credit of being the first man in Canada to sell wire and iron fences and gates direct to the consumer.

Our readers will understand that this method of buying saves them a considerable sum of money and the big business which Mr. Dyer is building up all over the country is proof that people are appreciating his methods. One thing we like about his business is his "square deal" to everybody, and his "send-'em-back-if-they-are-not-right" guarantee.

We would advise all subscribers to write for Mr. Dyer's free Catalogue and prices because we feel certain that it would be to their advantage.

Free Sample of Amatite—the Roofing That Needs no Painting.—There are doubtless many readers of this paper who are users of ready roofing, who are not familiar with Amatite. This is a new type of roofing which came upon the market a few years ago and has found wide favor on account of its mineral surface which needs no painting. This mineral surface is embedded in pitch, which grips the stone firmly and makes a kind of pitch-concrete surface. This surface is abundantly able to withstand all sorts of weather year after year without any painting. Its price is no higher than that of the old-fashioned painted kinds. In fact, in many cases it will be found to cost considerably less. Next time you paint your roofs remember that painted roofings are no longer the only kind you can buy. In the meantime it is a good idea to look up Amatite. You can get full information and a free sample from the manufacturers on request. Address, The Carritte-Paterson Mfg. Co., Ltd., St. John, N. B.; Halifax, N. S.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts. J. J. McLEAN & SONS, Hopewell, N. S.

SHORTHORN BULLS for sale. WALTER EATON, Upper Canard, Kings, N. S.

WANTED—Woman or girl for general house work. Good wages. MRS ROWLAND FRITH, Mount Pleasant Ave., St. John, N. B.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

IMPORT Bulbs and perennials direct from Holland at quarter price. Get import list at once. MORGANS SUPPLY HOUSE, London, Ont.

WANTED.—To trade a new gasoline engine for second hand portable steam engine 8 to 15 horse power. Write describing engine to B. care MARITIME FARMER, Sussex, N. B.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

SITUATION WANTED by Englishman aged 42, to manage dairy farm or herd. Used to Jerseys, (pure bred), calf raising, butter-making, pigs, poultry. BOX D, MARITIME FARMER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

THREAD POWER FOR SALE.—I have a two horse Moody thread power that I will sell cheap and on easy terms. The thread power is in a good state of repair and has not been used extensively. For particulars, write "Power" care MARITIME FARMER, Sussex.

Can New Brunswick Grow Apples?

In looking around for a capable person to look after the horticultural interests of the province and to act as a general in marshalling the forces that were convinced of the opportunities offered for fruit growing in New Brunswick, the Department's choice luckily fell upon a young man of considerable energy, who has already proven the wisdom of the choice. Although not a native of the province he quickly recognized the posibilities for the raising of more and better fruit. He has visited nearly all parts of the province and from the indications pointed to by a rich soil, favorable climate conditions and the successes achieved by those who have given fruit growing a fair and square trial he is fully convinced that the time is not far distant when other provinces will need to look to their laurels in the race for superiority in fruit growing.

For many years New Brunswick farmers have been buying their apple trees from agents, who were in many cases, regular "Mouth Artists." Trees were bought that were supposed to produce fruit such as was depicted by highly colored plates in the agent's sample books. It made little difference whether the trees were suitable to the climate conditions of the district where they were to be set out or whether the fruit was of marketable quality or not. In many cases, when the trees came to bearing, if they lived to that age, the farmer found that the fruit was not in any way true to name. By buying in this indiscriminate way it was not uncommon to find that the trees sent out by larger and more important orders the nursery were the culls left after had been filled.

In order to counteract this annual occurrence of loss of time and money Mr. Turney, the Provincial Horticulturist, is ready and willing to take the orders of all those who wish to purchase nursery stock and by buying from a reliable firm in large quantities, he will be able to get a lower price, better quality and trees true to name. See an article by Mr. Turney in this issue and if you purpose setting out few or many trees let Mr. Turney get them for you. He will also be pleased to give you proper instructions re planting the trees.

At the Annual meeting of the New Brunswick Fruit Growers' Association held in Fredericton last winter, it was proposed that a Provincial Fruit Show be held in St. John before the close of navigation on the St. John River. The department of Agriculture has taken action re the proposition and we now have a copy of the prize list for the proposed show which will be held during the first week of next November on a date to be announced later. If interested in better fruit and think you tributing some of your fruit and joining in the competition send to would like to help the show by con- Mr. A. G. Turney, Fredericton, N. B. for a copy of instructions and prize list. It contains some valuable information. Just drop a card to Mr. Turney today lest you forget and as a reply to the questions::

"Can New Brunswick grow Apples?

Can New Brunswick grow High Quality Apples?

Can New Brunswick grow commercial quantities of apples?

And can New Brunswick grow keeping apples?"

Exhibit Your Fruit.

Charlottetown Prices.

Grains.—Oats 34c. to 42c.

Feedstuffs.—Retail; Bran $1.20, Shorts $1.30, Middlings $1.40, Oil-Cakes $2.25 to $2.50; Corn Meal $1.50 to $1.80.

Live Stock.—Butcher's cattle 5c. to 6c., Stockers, not sold by the pound here; Milch Cows $35.00 to $50.00; Sheep 4½ to 5c; Lambs $2.50 to $3.00; Young Pigs $5.00 to $8.00 per pair.

Dressed Meats.—Beef (Carcass) 9½c, to 11½c; Mutton (Carcass) 9 to 10z; Veal (Carcass) 4c to 5c.; Lamb (Carcass) 13c. to 15c; Pork, None offering.

Dairy Products.—Creamery Butter solids 23c., Prints 23½c.;; Dairy Butter 17c, to 19c.

Poultry and Poultry Products.—Eggs 15½c to 16c; Fowl 12c.

Vegetables.—Potatoes 22c to 28c.

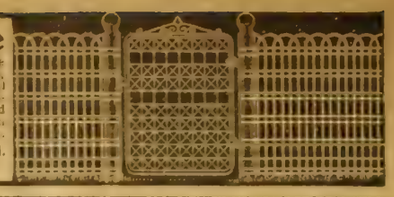
Miscellaneous.—Hay $10.00 $10.50; Straw $6.00 to $7.00; Wool 22c to 25c; Beef Hides 8c to 9c; Calf Skins 10c to 12c; Sheepskins $1.25 to $1.40; Lamb Skins 15c to 25c; Cowhangs 70c to 80c.

Market Review and Forecast.—Trade in general has been fairly good since our last report but the produce markets are still in rather bad shape. There is very little oats offering and price varies according to demand for local use. For shipping dealers are not willing to pay over 34c to 36c for white, but black is at a premium, selling at about 40c to 42c for export. The limited supply offering is being used for local consumption at about 40c to 42c for white and 44 to 48c for black. Potatoes continue without any special interest but the supply in the farmers hands is daily dwindling down and we think there will be very few potatoes sold if the price does not improve as farmers will not bother shipping them at all. Hay is also quiet the prospects of a large crop has increased the offerings and we look for no higher prices. Other lines are about steady. Creamery Butter is offering freely and prices are likely togo lower. Dairy Butter is likely at the bottom. The first meeting of the Cheese Board will be held tomorrow and it is only a guess with us yet what the price will be. The make for the first half of June should be heavy.

Peerless Lawn Fence

Is Strong and Attractive. All the wires are uniformly crimped, large gauge, steel spring wire, heavily galvanized and coated with white enamel paint. Never sags, never rusts. Improve your property with a Peerless Fence. Cheap as wood and more handsome and durable. Also full line of farm and poultry fence and gates. Write for information.

THE BANWELL HOXIE WIRE FENCE CO., Ltd.
Dept. K, Hamilton, Ont., Winnipeg, Man.



Fighting Weeds.

It is true, says John W. Chamberlin, that fighting weeds is not as common as it should be, and the work is not done as thoroughly as it should be. How often have I seen an effort made to destroy some weed by putting a hoed crop on the land and then find here and there all over it just enough of the weeds left to seed it all again. This is quite common with the daisy and the field mustard. It takes time to follow up the cultivator or the plow and make a finish of these specimens that are undoing all the work undertaken, but it must be done if there are to be results.

For this reason I have always doubted the utility of the summer fallow. It is so easy to let a few weeds grow.

Better put in a crop that will make war on the weeds by growing up and smothering them. I have never seen aa natural growth that would withstand a thickly-sown crop of buckwheat. It takes full possession of the ground and is urged on so fast by a little top dressing of manure that nothing will outgrow it. Buckwheat is somehow an unpopular crop, but it is so valuable for the one purpose —fighting weeds—that it should be sown much more than it is. Potatoes are generally worth much more as a weed-fighter than other hoed crops are, on account of the ground being dug over late in the season and in sections where two crops can be grown it would be easy to keep the soil moving often enough to kill all weeds that escape the regular cultivation or hoeing.

Weeds are queer plants in many respects. One sort or another often remains in a locality in an obscure way for an age and then springs up and makes an effort to obtain the mastery. There is in such cases some change of soil to account for that. In my boyhood days we were always fighting sorrel and spurrey, the latter seldom thought of as a weed now. I am convinced that the sorrel was so rampant because of an excess of acid in the soil and there must have been something there that attracted the spurrey, as both ceased to be troublesome after a few years, soil conditions changing with continued cultivation.

We are the great weed sowers ourselves. This is so well known to all cultivators that it will not need to be said as a matter of information. The professional cleaner of seeds is a benefactor of the race if he knows his business and he is not employed as much as he should be. The usual seller of seeds is a seller of a large percentage of seeds that are going to rise up and do us injury. I have pondered that fact ever since we seeded a large field to timothy and found next year that it was well towards half plaintain! And that plantain stayed with us till the field was plowed again, no doubt scattering its seed all over the farm.

It is the good farmer who is farthest out of reach of weeds. If all were good farmers there would be little to complain of. Still I repeat that I do not believe there is much need of going out of one's way to fight weeds. There is the natural enemy of most weeds in easy reach. Smother crops are better than hoed crops, and there are not many weeds that sheep will not eat, perhaps none that a goat will not, yet many farms are without either. There would be no wild carrots if sheep could get them. There would be no ragged growths if a few goats were kept.

Breeders Directory

Our charge for inserting names in this Directory is $1 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwich, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N.B.
Jos. R. Taylor, Upper Dorchester, N. B.

Ayrshire Cattle

R. J. Messenger, Bridgetown, N. S.
John A. Hughes, Petitcodiac, N. B
The S. H White Co, Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex N. B.
Syd. J. Goodliffe, Sussex, N. B.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

C. C H. Eaton, Canard, N. S.
Isaac Chipman & Son, Chipman's Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N.S

Oxford Down

Fred. S. Black, Amherst, N S.

Cotswolds.

Donald Innis, Tobique River, N. B
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.

SWINE—Berkshire.

J. R. Semple, Brule, Col. Co., N. S.
Howard W. Corning, Cheggogin, Yarmouth Co. N. S.

Yorkshires.

J. R. Semple, Brule, N. S.
A. A. McBeath, Marshfield, P. E. I.
The S. H. White Co, Ltd., Forest Glen, N. B
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yar. Co., N. S.
Boyd A. Wetmore, Harvey, Albert Co, N. B.

Chester Whites.

W. H. Moore, Scotch Lake, N. B.
Howard W. Corning, Coeggogin, Yarmouth Co., N. S.
W. C. McLeod & Sons, Loch Lomond West, N. S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex N. B.

S. Jones, Sussex, N. B., White Plymouth Rock, Barred Plymouth Rock, Silver Laced Wyandottes, Black Minorca, White Wyandottes, S. C. Brown Leghorns, White Leghorns.

W. J. M. McLeod, Loch Lomond, West N. S., Houdans and Silver Grey Dorkings and R. C. R. I. Reds.

GLENVIEW FARM.

Guernseys, Jerseys and Poultry

We are offering one yearling Jersey Bull and Calves of both sexes, Guernsey Bull Calves, under 6 months of age. Eggs for hatching from the following birds: Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Brown Leghorns and S. C. Rhode Island Reds. Send for Poultry Catalogue.

WALTER McMONAGLE & SONS,
Long Distance 'Phone, Sussex, N. B.

For Sale.

Ayrshire Bull Calf "Hill Grove Matchless" (30207) a promising young bull of good dairy type, his dam is a fine large cow a prize winner and a heavy producer. Also a few splendid heifer calves of last August and September. For particulars, write

JAMES BARRETT,
Hill Grove Farm,
Crouchville, St. John, N. B.

POTTS & CO.,

Commission Merchants.

Consignments of Small Fruits, Butter, Eggs, &c., solicited.

North Market St., ST. JOHN, N. B

THE MARITIME FARMER

AND

CO-OPERAIVTE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., July 12, 1910. Number 19.

FARM DRAINAGE OPERATIONS.

By E. S. Archibald, Agricultural College, Truro, N. S.

THE following article on "Farm Drainage Operations," by E. S. Archibald, Truro, N. S., appeared in Professor Cumming's 1909 report as Secretary for Agriculture in Nova Scotia. While Mr. Archibald wrote this article with special referenec to Nova Scotia conditions, the need for underdrainage is so prevalent in all the Maritime Provinces that the instructions given warrant our reproducing the article for the benefit of all those who are not fortunate enough to annually receive Professor Cumming's reports :

Many farms in Nova Scotia are naturally well drained, but on the majority we see the great need of some artificial means of drainage. Of this latter class many have already been converted into the most productive lands by a thorough system of underdrainage. Why has not the practice of underdrainage spread more rapidly as its financial benefit would warrant ? The reasons might be summarized as follows : Insufficient knowledge of drainage operations, insufficient knowledge of the cost of drainage, and, finally, the initiative power to overcome criticisms and obstacles. The first is by far the most important and will be the chief consideration of this article.

Drainage operations in eastern Canada present many peculiar and difficult problems. The higher lands are of a hilly character, and consequently more or less springy. Enclosed in theee hills we find extensive tracts of bogs, varying in size and character, but all enclosed by a higher surrounding ground. Take, for example, the Agricultural College Farm, at Truro N. S. This farm, rising sharply from the Salmon River, contained a series of swamp holes extending up through the centre, each bog several feet higher than the preceding one, yet enclosed by a crown of earth which prevented natural drainage. By the aid of a careful system of drains, laid out by Mr. F. L. Fuller, then Farm Manager, and carried out by his successor, Mr. S. A. Logan, these areas, once useless, are now our most fertile fields.

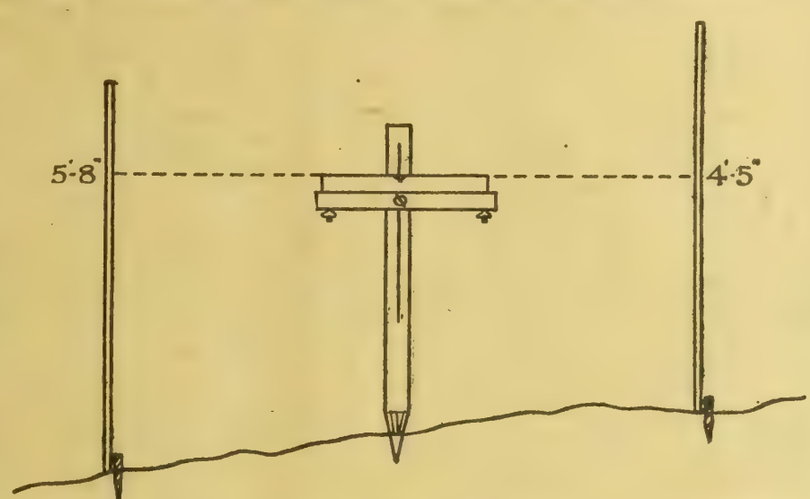


Fig. 2.—Home Made Drainage Level, showing method employed in using it.

Again, our soils vary greatly, which adds many difficulties. Marsh drainage is a problem of different nature and new aspects. Nearly all these areas can be drained profitably, and in most instances the tile underdrain must eventually predominate. Many failures have occurred in the past through ignorance, carelessness, and lack of systematic procedure.

PRELIMINARY SURVEY.

In fully fifty per cent. of cases in our upland drainage the most essential point is to determine the outlet. This done, a natural system of drains, i. e., the main drains, sub-drains and laterals, following the natural water course, is easily installed, and the system is ideal. Much money has been wasted, however, on mistaking the outlet and the economy of making an extended survey is apparent. The character of the soil is another essential to the preliminary survey. The natural course of the drains to the outlet must also be considered, always holding in mind the following precautions : 1. Lay main drains in line of natural drainage. 2. Lay lateral drains in line of greatest slope. 3. Avoid short laterals. 4. Run laterals directly up grade, rather than diagonally to a spring. All these points are self-evident to the experienced drainer, or the intelligent beginner.

EXTENDED SURVEY.

On level or slightly rolling ground apparent elevations are often deceiving. Many mistakes in locating the outlets, and systems of drains have been made during the past, by using the unaided eye in a general survey. This extravagance and inefficiency soon became apparent and now the surveyor's spirit level or transit has been adopted to find the exact lay of the land. Space will not permit of a detailed account of these operations, but we might briefly summarize as follows : The field under consideration is partially staked off into one hundred foot squares, the transit is set up within reading distance of as many stakes as possible, and the surveyor takes readings on the graduated surveyor's staff, or speaking rod, at each of these stakes. Exact notes of all readings are kept and are figured to a common basis, thus giving comparative elevations of all points of the field. These elevations are then chartered, and the system of drains accurately laid out on the chart. This is a simple operation, requiring slight experience, but accuracy, patience and the expensive surveyor's instruments. Where such operations are needed, it would pay the farmer to hire a surveyor. I am pleased to state that a very worthy movement is now on foot to supply Government aid in such matters, having a man who is both a good surveyor and a drainage expert.

The home made drainage level (Figure 1) may be used for a similar purpose, but it is of greater accommodation, accuracy and use in surveying the drains after being located by either preliminary or extended survey.

STAKING OUT THE DITCH.

Having the ditch located, it should be staked out with several 6 foot stakes which guide in opening the ditch with a plow. Then starting at the outlet (as in digging) measure the drain with, say a 100 foot tape. At each 100 foot mark drive a short guide stake one foot from the ditch, marking on it the distance from the outlet and later the depth of ditch at that point.

DETERMINING FALL OVER DITCH.

Again starting at the outlet we use the home made drainage level. This instrument consists of : 1. An ordinary carpenter's level (L.) 2. The wood is 3x1½ inches plained pine. 3. The upright is 5½ feet long, with a 2½ foot slot. 4. The cross piece 2 feet long is bolted to the upright and washered at nut and head. 5. The wood screws, with thumb heads, pass upwards through a cross piece to touch the bottom of carpenter's level, thus aiding in making this instrument perfectly level without disturbing the support. 6. Two iron buttons on cross piece hold the level secure against the upright.

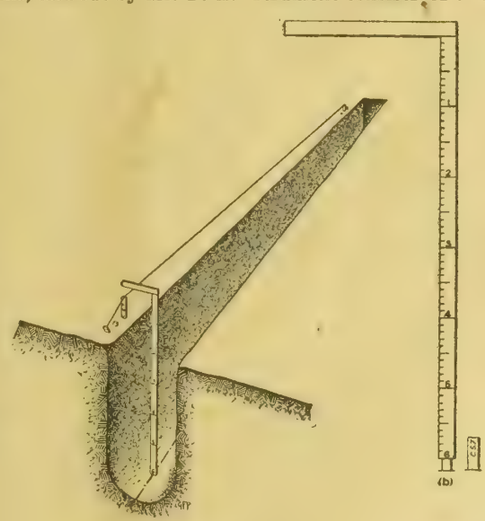


Fig. 4.

This instrument is firmly punched into the ground, about half way between the stake at outlet, and the second stake, and then carefully leveled. One man holds the graduated staff at stake No. 1 whilst the other sights over the top of level, and, as in figure 2, finds it level with the 5 foot 8 inch mark. The staff men then changes to stake No. 2 and the top of level here sights to 4 foot 5 inches; hence there is a rise of 1 foot 3 inches in the first 100 feet.

Accurate notes are kept as follows, these notes being taken by students during a survey at the College Farm at Truro :

NOTES ON MAIN DRAINS.

Stake.	Back Sight		Fore Sight.		Fall.		Rise.		Elevation	
	Ft.	In.	Ft.	In.	Ft.	In	Ft.	In	Ft.	In.
1 (at outlet)	5	8	.....		.....		.....		10	.....
2.	5	9	4	5	. . . . .		1	3	11	3
3.	4	11	5	1	.....		 8	..	11	11
4.	5	1	4	2	.....		... 9	..	12	8
5.	5	2	5	4	.....	3	..	....	12	5
6.	. . . . .		5	10	.....	8	..	....	11	9

N. B.—The elevation of stake 1 was taken as 10 feet from an imaginary horizontal plane, commonly called the datum plane, from which to work relative observations. (See Fig. 3.)

Peep sights (P, Fig. 1) used on top of level make sighting work more accu-

rate. These are manufactured by H. Occomore, of Guelph, Ontario, and we would recommend them for use, especially in hot summer weather.

DETERMINING THE GRADE OF DITCH.

To one having experience in underdraining, the value of determining the fall over the ditch is of unquestionable importance and value, especially on comparatively level tracts where every inch of fall must be saved. But the question of uniformity and trueness of grade is even more essential, and these preceding steps lead to a series of easy methods which must, if carefully preformed, give accurate results. The average farmer finds his chief difficulty in determining the grades of his ditches so that he may not go too deep, or too shallow when cutting through uneven ground; hence is given below a common method by which he may work out all grades of ditches from date previously taken in determining fall over ditch. The illustration (Fig. 3) might be briefly explained in its various steps, as follows:

1. Obtain a piece of Co-ordinate or Surveyors' Cross Section paper ruled in one inch and one-tenth squares.
2. Fix the imaginary datum plane.
3. Let one inch equal five feet in elevation and mark in the outlet.
4. Let one inch horizontally equal one hundred feet and mark in the stakes on datum plane with elevations at proper distances above
5. Jointing these elevations we have a profile of the ground surface.
6. As protection against frost, we would dig at stake 6 not less than 2½ feet and for effiency at the outlet, say 3 feet. Since one inch or ten spaces equals five feet and one space or one-tenth of an inch would represent 6 inches in eleration, hence 5 paces represent 2½ feet.
7. After marking these two points, stake 1 and 6, place a rule on them and dot the imaginary ditch bottom. We note that at stake 4 we are nine spaces, or 4½ feet from the ground surface and we would look for some cheaper, and, if possible, as efficient ditch. If possible, we must in tile draining have a fall of 2 inches per 100 feet.. With the uniform grade (dotted line, figure 3) we have four spaces, or 24 inches fall in 500 feet, or 4.8 inches per 100 feet. Hence, by making the grade slower we may cheapen digging and still have very efficient drainage. A careful study of figure 3 would make this problem clear and show its marked advantages. Other instances might ne sighted where this method is unexcelled; take for example a perfectly level stretch, by thus charting we may find our available fall when natural fall is nothing. After these operations mark depth of diggings on guide stakes.

DIGGING.

The most of our digging in Nova Scotia, is now done by spade, or shovel and pick, but under average conditions this is too expensive. Plow may be used to greatly cheapen the digging.

1. With an ordinary plow open the drain eighteen inches wide, throwing furrows outward. Now throw two furrows together in the bottom of started ditch, and shovel out. Continue this second operation as long as possible by widening the lines, using a long double-tree, one horse being on each side of the ditch and a six foot chain extension to the beam. We may comfortably loosen the earth by this means to a depth gf eighteen inches. It is now necessary to have something which will dig a narrower trench. An ordinary subsoil plow is good for this purpose, plowing up and down in the centre of the trench. Lacking this instrument, we may readily remodel an ordinary plow, as follows: Remove the mould- board and bolt a narrow block between the handles,

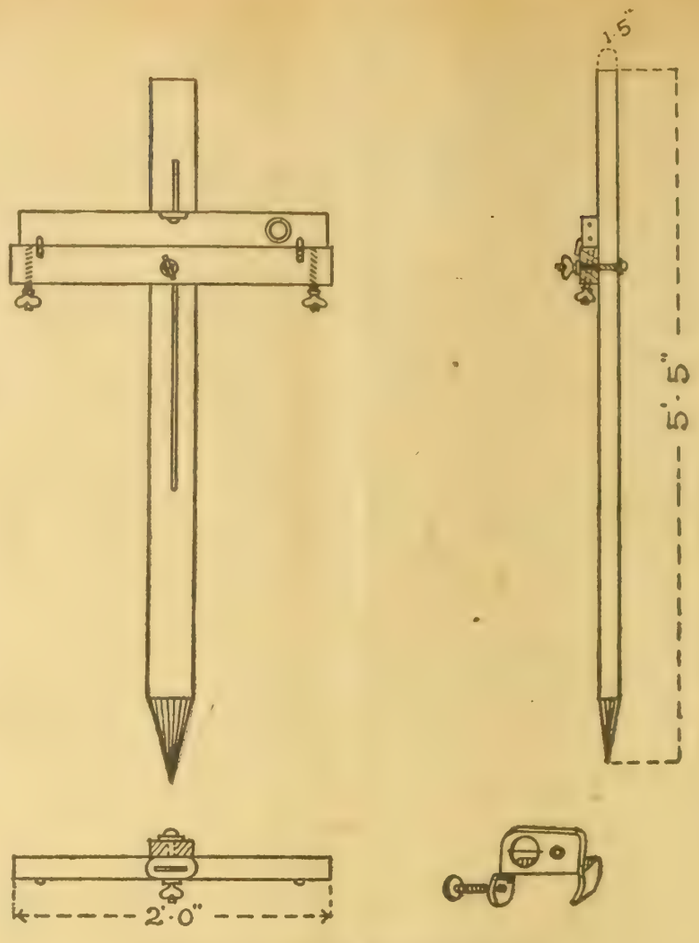


Fig. 1—Home Made Drainage Level.

running a brace from it to the back bolt in the beam, thus steadying the handle. Put on a new narrow point, and narrow the handles by shortening the rod. This makes a very useful and serviceable instrument. On some of our sandy soils the use of the plow is unnessary, but on average loam and clay soils, a man can by using such means throw out fully one half more per day with greater ease.

GRADING THE DITCH.

The usual method of grading the ditch bottom with running water is very good, but even here there are objections. During the mid-summer months we are, as a rule, unable to obtain this supply. This method leaves many chances for carelessness A great many ditchers think that providing the water will run in the open ditch, the underdrain will be fully as efficient. This often leads to trouble. The grade of an underdrain must be uniform, as sudden changes from a steep to a slow grade, invariably means sedimentary deposit in the tile. Hence, these greater or lesser uniformities must be either prevented or provided for. For the latter, such a drain coming down a steep grade to a slow grade, silt boxes and catch basin (preferably of cement) are essential. For the former the following method might be recommended.

An old method of grading the ditch bottom with the boards and carpenter's level is still much used. This was a step in advance of the use of the unaided eye, or even of flowing water, but the board is a clumsy article, especially if as long as to insure perfection. Even in the best of hands it is not perfect, and allows many chances for errors, and only this year I saw such an example. By levelling over the laid tiles in said ditch, with the home-made drainage level I found a marked lack of uniformity of grade, in some places the tile grading in opposite direction from the natural flow. This ditch, I must confess, was a difficult proposition, but the drainer was both experienced and careful, and had he used the following method the operation would have been more simple and efficient.

By the use of the plow we may suppose the ditch of figure 3 to be dug within a few inches of the bottom. At the outlet, stake 1, where the drain is to be 3 feet deep, drive a stake 6 inches from the edge, having 3 feet of the stake above ground. At stake 2, where the drain is also three feet deep, repeat this process. Draw a line or wire tight and straight over the tops of these two stakes, and anchor the ends to pegs or weights. You will see that all points on this line must be exactly 6 feet above the finished drain bottom, however irregular the ground surface may be between stakes 1 and 2. As a guide in digging, cut a piece of 2 by 1 inch board 7 feet long. Toward the upper end of this nail at right angles and brgce a 2 foot cross piece at such a height that when the upright is stood on end the lower edge of cross piece is exactly 6 feet from the ditch bottom, In digging, this answers splendidly as a guide, it just touching the upper edge of the cord when the proper depth is obtained, see figure 4. In driving these line stakes, say at stakes 3 and 4, we know at stake 3 the ditch is to be 3 feet 6 inches deep consequently we will drive the stake so as to have 2½ feet above the ground, thus making the top stake 6 feet from ditch bottom. At stake 4, the ditch will be 4 feet 1 inch deep, hence we wish but 1 foot 11 inches of stake above the ground, and all points on the cord will be exactly 6 feet above the finished ditch bottom and the uniform grade obtained.

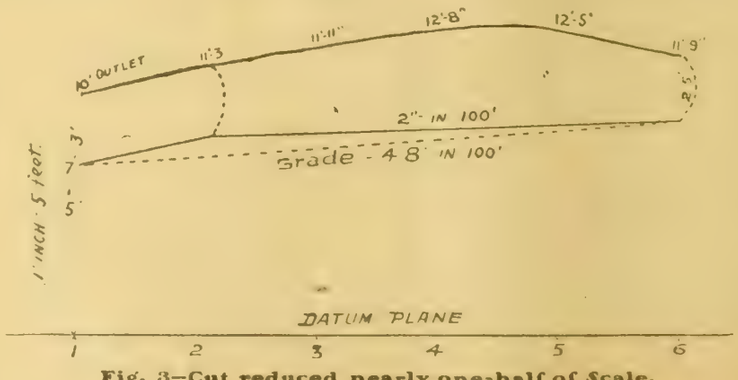


Fig. 3—Cut reduced nearly one-half of Scale.

LAYING TILE.

Through land of swampy or quicksand character it is always necessary to lay the tiles on boards. The precaution, such as joining the tiles evenly and tightly, and filling of 6 inches of earth over the tile, as a lid, to retain this evenness, are self-explanatory. Under average conditions, nothing is needed over the joints of tiles, but in cases of emergency tar paper, gravel, sawdust, etc., may be profitably used.

It is unwise to allow the digging to get too far ahead of the laying and filling. A rain at this stage does serious damage in caving the sides, or running sediment into the tile already laid. To prevent this, the following precautions are useful: Place sods at the tile joints immediately after laying, followed by a few inches of earth. Tightly plug the upper end of the tile at the close of the days work, or before a heavy storm, complete the filling of drain as soon as possible. This latter operation may be greatly cheapened by the use of horse power. Plowing in the dirt is a very common practice. A V-shaped wooden scraper is splendid on sod land, and I have found the ordinary horse scoop or shovel as good as any. With a steady team on one side of ditch and chain extension to the scoop on the opposite, a man can fill over five times as fast as by hand. After completing the drain, it is often wise to plow a high, narrow land with the drain top as the centre. This prevents surface water collecting over the top of drain, or from washing out the newly-filled dirt. Remember that one tile filled with sediment or gullied out of line by above means will spoil the efficiency of the whole system. If a relief surface drain is needed after the ditch has become thoroughly compacted, make this shallow, say a dead furrow about two feet, on one side of the tile drain. Occasionally we note the need of catch basins to prevent surface washing during heavy storms. These, as silt boxes, must be, at least, one foot deeper than either the incoming or outgoing tiles, so that sediment may have a chance to settle.

(Continued in Next Issue.)

The world's most sucressful medicine for bowel complaints is Chamberlain's Colic, Cholera and Diarrhoe Remedy. It has relieved more pain and suffering, and saved more lives than any other medicine in use. Invaluable for children and adults. Sold by all dealers.

Nova Scotia Farmers Visit the Agricultural College.

For several years it has been customary for the farmers of the Annapolis Valley counties and the counties bordering on the Intercolonial Railway in Nova Scotia to hold an annual excursion to the College Farm, Truro, where they enjoyed a social picnic, interspersed with lectures by statesmen and agricultural experts, saw the well kept stock of the Farm paraded before them and inspected at will the various buildings, machines and growing crops.

Last year these counties arranged to meet on the college farm on the same day and it was, indeed, a grand sight to see such a large, well groomed, respectable concourse of representative farmers, their wives, their sons and their daughters. This year, the arrangement was somewhat different. The Annapolis Valley farmers' excursion being held on Friday, June 24th and that of the other counties on Saturday, June 25th. The weather was all that could be desired on both days and numbers far in excess of those of other years attended.

As the various groups arrived at the farm they sauntered hither and thither, first through the college building and then to the various stables, pens, poultry houses, implement sheds and finally wandered off to the expermental and field crop plots on various sections of the farm. The College Farm consists of about 210 acres: 100 of upland, 50 of intervale, and 60 of marsh. Of the marsh, 8 acres are in oats and the balance in hay. The intervale is entirely devoted to pasturage. Of the upland, about 30 acres are in oats, 2 in barley, 8 in corn, 10 in roots, 1 in potatoes, 12 in hay, 2 in green feed, 3 in orchard and garden, and 1 in a forestry plot. The balance comprises the College campus, barn and poultry buildings, with attached grounds, and uncleared land. Of the cultivated, described above, 7 acres

Buckeye Traction Ditcher in operation on the College Farm

of grain, corn, roots, potatoes, etc., are devoted to variety and culture experiments. Besides, 22 acres of the crops are under fertilizer tests. Nothing but commeendation could be heard of the various things inspected. The professors and assistants, in charge of the various departments of the college, were at their posts to answer questions and give full information re the methods pursued in conducting their respective branches of the farm work.

Lunch was served on the grounds after which the sight seers were given the opportunity of seeing a parade of the College Standard Breds Hackeneys, Thoroughbreds, Clydesdales, Shorthorns, Ayrshires, Holsteins and Jerseys. Dr. Standish oointed out the merits of the respective horses and Professors Cumming and Archibald explained the merits of the different cows of the various breeds shown. Following are some of the records of cows kept on the college farm as they appear in a cilcular distributed for the information of the visitors :—

Breed	No.	Milk Produced 1908-09	Milk Produced present year to date.	P. centage Fat in Milk
Ayrshire	1	11½ mos., 10,215 lbs	97 days, 5,173 lbs	3.7 to 4.5
"	2	9½ mos., 9,894 lbs		3.4 to 5.1
"	3	12 mos., 11,465 lbs		3.1 to 3.8
"	4	12 mos., 12,273 lbs		3.1 to 3.7
"	5	12 mos., 7,973 lbs	148 days, 5,984 lbs,	3.3 to 4.2
"	6	11 mos., 7,756 lbs		3.4 to 5.9
"	7	(2 year old heifer),	223 days, 3,921 lbs	4.1 to 5.0
"	8	" "	207 days, 5,243 lbs	4.0 to 4.8
Holstein	1	10 mos., 10,291 lbs	89 days, 3,941 lbs.	2.7 to 3.5
"	2	9 mos., 12,826 lbs	141 days, 9,181 lbs	2.9 to 3.4
"	3	11½ mos., 14,154 lbs	160 days, 8,286 lbs	2.7 to 4.3
"	4	11 mos., 11,095 lns	118 days, 6,111 lbs	3.0 to 3.7
"	5	12 mos., 11,990 lbs		2.7 to 3.4
"	6	(2 year old heifer),	147 days, 4,151 lbs	3.3 to 3.4
"	7	" "	92 days, 2,485 lbs	2.8 to 3.0
Jersey	1		237 days, 8,255 lbs	3.9 to 5.6
"	2	11½ mos., 6,368 lbs	145 days, 5,055 lbs	4.1 to 5.4
"	3		282 days, 6,770 lbs,	3.6 to 4.7
"	4		148 days, 4,426 lbs	4.3 to 4.7
"	5		301 days, 4,754 lbs,	3.8 to 5.2

Valuing milk at $1.00 per cwt., or butter at 25c. per pound, these cows have made a profit of from $30.00 to $50.00 each, not including the extra value of the calves produced from such utility animals. Cows of this sort will prove the most efficient means of economical production of milk and butter and will make dairying, which here-to-fore has afforded a comparatively small margin of profit, one of the most valuable industries of the country.

With the exception of a few Shorthorns, none of the stock is offered for sale at the present time, but considerable will be sold during or after the Short Courses in January, 1911.

"After the college cattle were shown Postmaster Blanchard's herd of 22 dairy cows, mostly grade Ayrshires were driven into the ring and a good looking lot they were. Mr. Blanchard has a small farm adjoining the college grounds. The milk he sells at the door. But let him speak for himself. He was the last speaker, a farmer to farmers. He told about his herd and what he got from them. He said the accounts were open to anyone to examine and they would show that he made, year after year, $1,200 net profit from his herd of cows.

The addresses on live stock were interspread with addresses by some prominent statesmen and others interested in Agriculture.

One of the interesting features of the two days was the operation of the new ditching machine which had just arrived, under its own traction power, at the dollege farm, from Shubenacadie where Supt. Fuller had completed ditching contracts that showed the merits of the machine. The machine was started behind the new implement shed and its work was much admired by all those interested in land drainage. We believe the employment of this machine will solve the drainage problem and will be of immense benefit to the agricultural industry of Nova Scotia in particular and the Maritime Provinces in general.

As a rule farmers are rather conservative in their ideas, re the advisability of buying expensive machinery of this kind, but, when the merits of a certain machine are exemplified to them, the progressive ones do not hesitate to launch out and put in the field machines for their own use and which their neighbors may also use for a nominal fee. It is delightful to see such large numbers of people meeting to discuss and inspect modern agricultural methods irrespective of political strife or creed.

In the poultry department, Prof. Jos. Landry was kept busy, among the feathered stock, explaining the proper methods to practice, and appliances to use, in poultry culture.

About four o'clock the picnicers returned to the railway station where they witnessed exhibition runs by the Truro fire brigade, after which they repaired to their respective trains feeling that the days had been well spent and that they had gleaned some valuable ideas that they can sooner or later put into practice, on their respective farms. They felt that the social intercourse with fellow farmers had been highly beneficial to all concerned and that Principal Cumming and his effecious staff were the most courteous officials one would care to meet.

Farmers' Day at the College Farm—Shorthorns on Deck

Farmers' Day at the College—Jerseys up for Inspection.

Farmers' Day at the College Farm—Ayrshires on Parade

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser be said :—**"I saw" your adv. in the MARITIME FARMER.**

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SUSSEX, N. B.

Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 9,000 Copies. Every one going to a bona fide subscriber.

JULY 12, 1910.

Dates of Issue.

July .....—26
August ..... 9—23

WE WANT TEACHERS OF THIS KIND.

In a recent issue of Wallace's Farmer, Henry Wallace, its veteran editor, tells what he saw in the way of a practical farm school while visiting in various parts of Michigan. The teacher, a genus young woman, who was teaching agriculture in a way that was very impressive. He says:

"What most delighted me, however, was the opportunity to visit a genuine rural school, out in the country, that has perhaps twenty or thirty students and is taught by a farmer's daughter whose heart and soul is in her work. She had in one corner of the school house, perhaps half a wagon-load of soil for the purpose of instruction. I was particularly fortunate in arriving there at a time when she was teaching a class of children of the sixth or seventh grade. One boy had been taken by his father from the high school and put in this rural school, believing he could get a more practical education there than in the high school. The class numbered some eight or ten. The teacher was using a text-book of which I had never heard before, having each child read the questions, then elucidating the questions by questions of her own. I have never seen a class in any school anywhere that seemed to be more deeply interested or more eager to ask questions than some of these "kids," who knew more about the soil and crops than the average farmer—instruction which must prove an untold blessing to them in the future, whether they be farmers or farmers' wives.

"What a fortunate thing in after-life it will be for those farm boys and girls that they have had the inspirational touch and contact with that young woman. Who says that the farm intellect of this country is not awakening when such things are possible? Twenty-five years ago it would have been impossible to find such a teacher or the pupils, or the farm community which would consent to such a school."

THE BULL IS THE FOUNTAIN HEAD.

It is well in every spot and place in this world, to exercise all the plain, common sense we can. This is eminently true of breeding dairy cattle. All sorts of theories will greet a man as he enters this field, but there is one principle that will carry him through safely if he will but follow it. That is, to always consider the bull as the fountain head.

Spare no expense to get the best bull obtainable every time you purchase. Follow this rule just the same with a grade herd as you would with a pure bred. One great reason why you see so many poor grade cattle is because farmers have so generally followed the idea that any sort of a bull would do for a grade herd.

It will be impossible to keep back the work of rapid improvement in any herd if the owner follows strictly the rule of buying the best bull he can get and weeding out the poor cows. He will be astonished at how quickly the yield of his herd increases if he follows this plan.

BILL NYE'S COW.

Bill Nye is credited with having actually advertised a cow with which he had had an unfortunate experience, as follows :

"Owing to ill health, I will sell at my residence, in township 19, range 18 according to the government survey, one plush, raspberry cow, eight years old. She is a good milker and not afraid of the cars, or anything else. She has undaunted courage and gives milk frequently. To a man who does not fear death in any form she would be a great boom. She is very much attached to her home, at present by means of a log chain, but she will be sold to anyone who will use her right. She is one-fourth shorthorn and three-fourths hyena. I will also throw in a double-barrel shotgun which goes with her. In May she generally goes away for a week and returnes with a tall red calf with wobbly legs. Her name is Rose."

It would be a good thing if all advertisements were equally honest, if not as genuinely humorous.

PROVIDE SHADE.

Provide good shade, housing the stock during the day if necessary in darkened stables through which fresh air passes and in which stock will be less annoyed by flies and can be conveniently fed some grain and dry roughage or some soiling crop. No one would allow his animals to stand out doors in winter to starve and freeze to death and no sooner should one allow them to stand out in the summer to starve and burn to death Supply plenty of pure, fresh water and the best feed available from the crops which you had foresight enough to sow earlier in the year to tide over the short pasturage season.

SCIENCE AND COMMON SENSE.

The men who handle cows, are rarely scientific in their knowledge or judgement in regard to the animal or the conditions that surround her. Yet, if they are reasoning, observing men, they have a chance to learn a great deal. We hear a great deal among such men about "common sense;" which, if you understand it, means the sense they have. What is common sense? We spent a week once, in hard study to define it and yet it is a thing that is on the tongues of men continually. The best definition we could work out was the following :

"Common sense, is the widest understanding possible, of the relation of common things and our relation thereto."

The things to be judged are the facts. In order to exercise common sense about common things we must know as widely as possible all the facts which affect these common things. Do we know them? If not, we can exercise this needful judgement called common sense.

What is science? Nothing but judgement based upon a knowledge of the facts. Does the scientist know all the facts? If so, he is the more completely a scientist. Wherein then does science differ from common sense? Nowhere, providing a knowledge of the facts and laws which govern their action is had. Some scientists excell others in strength and accuracy of judgement; they understand better the meaning and action of the facts they know. It is just the same with common sense. The same knowledge does better with one man than with another. This differegce lies in the power and force of judgement.

Now the men of true common sense will never be heard sneering at science. His judgement tells him that scientists have had the opportunity to look farther into the facts. He respects knowledge wherever he finds it.

He knows that though the cow, for instance, is a common thing, yet she is surrounded by a vast number of facts that cannot be looked into and studied except in the light of science. Take the action of bacteria in milk ; in the food of the cow ; in the diseases which affect her which are nearly all of bacterial origin ; in her surroundings. These organisms, so minute that they cannot be seen or studied except by the aid of the microscope, cause wonderful change in all life. Indeed they change life to death. How shall common sense, unless aided by science, understand them and provide against their destructive action?

The farmer must cease sneering at science. Indeed no really intelligent farmer does that. He must see that scientific knowledge is simply his knowledge carried further. Of course mistakes will be made, yet the scientist makes less than the common man because of his greater training in careful weighing of the facts. Science has done wonderful things for the dairy farmer and agriculture in general.

BREEDING TYPE.

When the type has been established in a herd it is also desirable that the sire and dam be as nearly alike as possible, in which the sureness of their ability to reproduce their good qualities in their offspring is increased and retrogression guarded against. All of which goes to show that it is necessary to have a fixed plan if one shall realize the most out of his work for better animals. The improvement is greatly retarded if the cows one year are bred to one breed and the next year to another breed, and the improvements cannot be expected at all if the cows are bred to bulls of unknown breeding or ancestry. That sort of breeding or crossing should be dis-continued, and the sooner the better. Breeding within a certain breed is always to be preferred.

EDITORIAL NOTES.

The milk of every cow should be weighed and a record kept, and the milk should be tested by the Babcock test twice a month. You will never know the true value of each cow in your herd until this is done. To do it will require a little time, but it will prove the most profitable time you devote to your whole business.

* * *

Anything cruel to the bird, deceptive to the judge or unfair to a fellow exhibitor is facking.

* * *

Every legitimate business deserves the best there is in one. He should give the work his best effort and thought, or get out of the way for a man.

* * *

Oiling the harness is a good job for a rainy day; it makes the harness wear longer and it certainly looks better.

* * *

Nearly every man living is an advertiser ; he may not buy space in newspapers, but his advertisement appears somewhere ; a well kept home is one sort of advertisement, a sagging gate is anorher. How do you advertise ?

* * *

Implements and farm machinery not in use should be under the shed or in the tool house. Rust is one of the best friends of the implement maker.

* * *

If you are not getting the desired results find the cause, investigate the conditions and remedy them.

The N. B. Immigration Report.

The first annual report of the Soperintendent of Immigration of New Brunswick is printed in convenient pamphet form, and is extremely interesting reading. Mr. Wilmot makes it clear that he is working and does not regard his office as a sinecure. As he says, only a beginning was made in systematic immigration work last year, yet enough was accomplished to justify the creation of the Department. In summing up Mr. Wilmot is optimistic of the future. He says :—

The prospect for larger immigration in New Brunswick is bright. The construction of railways and the development of mineral resources of the Province will provide for the employment of many men and the expenditure of much money. Increased land values and a wider market for the agricultural population must follow. When such facts as these are placed before the home seekers we require the results will more than justify the expenditure and effort necessary to accomplish our undertaking.

After reviewing the preliminary work leading up to the creation of the Department of Immigration under the direction of the commissioner for Agriculture Mr. Wilmot proceeds:

PRELIMINARY WORK.

Before attempting to grapple with the problems incidental to a successful immigration policy, I decided to ascertain for myself what others were doing, and how they were doing it.

With that object in view I visited Halifax, Montreal, Toronto and Ottawa, and consulted with the Immigration and Colonization officials of those centres in regard to promoting immigration and handling the settlers on their arrival.

From Mr. A. S. Barnstead, of Nova Scotia, Messrs. Marquette and Caufell, of Quebec, Mr. Thos. Southworth, of Ontario, and the Dominion Superintendent of Immigration, Mr. W. D. Scott, I gathered a great deal of useful and practical information.

These gentlemen had perfected their systems in the light of observation and experience, and did not hesitate to give me the benefit.

On returning to St. John my first step was to call the attention of those interested to tne fact that the Provincial Immigration Office at 4 Church Btreet, was open for business.

Blank forms to be used by those requiring farm help were distributed among the members of the different Agricultural Sacieties and other employers of labor throughout the Province. Letters were written, and correspondence invited.

As a result upwards of 100 farms and ten water powers were listed; the reasons offered for selling the farms were old age or sickness, and no one at home to take up the farm work, difficulty in getting farm labor, etc.

Applications for farm help came in less rapidly, possibly because a class of labor which was drifting in from time to time had proved unsatisfactory.

THE REQUIREMENTS.

I found a demand for a high class of farm labor, workers who understood farming and were not without some executive ability.

There were also requests for inexperienced men and boys willing to learn farming.

A continuous call for domestic servants was always in evidence.

I found a considerable number of farms for sale, some were listed far in excess of their market value, others offered at a fair value, while not a few could be got at bargain prices.

Besides these were the vacant farms, a large proportion of which were available at low figures, especially to a purchaser who knew values and had the cash.

With these requirements before me I turned to Great Britain where every State in the Empire is actively bidding for a share of her wealth and the best of her bone and sinew.

New Brunswick's London Office was at that time not organized as an effective emigration agency. My attention was in consequence partly turned to the booking agents, the men who nave the saying of the last word to the emigrant. In this I was particularly fortunate in arousing interest and co-operation, which has been followed by an almost constant supply of desirable farm laborers, many of whom brought their families.

The story of these people since their arrival in New Brunswick, of their success and their satisfaction at having come, will serve as an inspiration to others who are looking beyond the seas for a land of opportunities.

Immigration coming under direction of Superintendent of Immigration was as follows from :

Scotland	193
England	79
Ireland	17
Poland	7
Sweden	5
Holland and Germany	4
Total	305

There were seventeen families, numbering seventy-five people, of which ten familes went to the land.

Domestics	30
Single men to the farms	210
Single men to other than farm work	90

PENSIONERS.

This particular class of immigrants require an introduction because they come to the Province under conditions heretofore impracticable.

In the month of March 1908, the British War Secretary made it possible for pensioners of any age wishing to emigrate to commute that part of their pension above one shilling per day, provided the Government of the Province receiving them would undertake to supervise their settlement and safeguard their money.

I suggested a scheme to accomplish this which was finally adopted by the War Office and the Provincial Government, and which I hope will result in the immigration to this Province of a large number of this desirable class of trained men of ability, energy and character, most of whom have already had some colonial experience.

Already the following pensioners have been placed in the Province and are at work getting some practical experience before buying a homestead A. C. Milne, J. W. Mansfield, George Pipe and Edward Eyres-

Take this little group alone, and if we capitalize the present cash value of one or two shillings per day which they are drawing, and add to that amount the cash already realized from their commuted pay, it will be found to represent the tidy sum of $12,000.

Notwithstanding the fact that these men with one exception came to the Province at the least advantageous season of the year, namely, the late fall and early winter, the results have been particularly gratifying.

There are in Great Britain many thousands of capable girls who would come to Canada if they had the means to pay their passages. At home their wages average $5.00 per month, and they are anxious to improve their position. It occurred to me that with reasonable care exercised by our correspondents abroad a good selection of domestic servants could be brought to the Province, and that there would be the minimum of risk to the employer in advancing the passage money.

Up to December 31st I placed thirty domestics with those who applied at this office.

Upwards of $800.00 was advanced by the employers to pay the passages. I have yet to hear of a dollar being lost by anyone. The girls, while not expert cooks and housekeepers, have maintained a good standard for industry, and have shown a determination to become familiar with the work requiced in a New Brunswick household.

THE PLACING OF IMMIGRANTS.

Those who arrived were sent out to the different sections of the Province where places had been provided for them. There was always a cottage or a flat somewhere in the country available for each family arriving. Consequently there was no confusion from delay.

In placing immigrants whether they be laborers or settlers, each man is sent to a certain farm or locality, because it is thought that he will do better in that particular place or give more satisfactory results to that particular employer. In other words, a haphazard distribution is to be avoided.

FRUIT EXHIBIT.

The New Brunswick display of apples made for the first time at the Horticultural Show at Westminister last December, was a revelation to many who had not associated this Province with fruit growing.

The London "Standard of Empire" makes the following interesting reference to that event :

"Among the new comers was New Brunswick, making a most creditable display of a great variety of apples, which says much for the capacities of this Province for fruit growing, in respect of which very little has been heard hitherto. The silver gilt Knightian medal was awarded for the collective exhibit and silver Banksian medal to three individual exhibitors."

The day is coming when New Brunswick will take a first place in the markets of the world as a fruit producing country. That day will be hastened if our fruit is placed on exhibition at as many agricultural and horticultural shows as practicable.

Mr. Obed Smith, who has charge of Dominion immigration in Great Britain, has invited the Province to keep fruit on exhibition at the Dominion Government Offices in London. The Canadian Pacific offered their agencies for the same purpose, which together with a good display at the Provincial Government Offices, London, should prove a most valuable advertisement for the prize winning fruit which New Brunswick produces.

SOME RESULTS.

One year has passed since this office was established, a year during which the work must of necessity be largely formulative

Yet something has been accomplished.

An industrious and intelligent class of people have come to remain. They are all at work. No complaints are coming to this office from them or their employers. They appreciate the health giving climate and the material advantages that are theirs. The hope to cultivate their own land will become a reality—no longer an idle dream; and they mark the difference.

I happen to know of twenty settlers who are coming to New Brunswick because of the success of friends who were placed last yeas. There are probably many more.

Paints on the Farm.

Never apply paint or any other coating to green or unseasoned timber.

Paint the outside of buildings in the autumn after the hot weather is passed, or in winter. Oil paint, under cold, hardens so as to be much more durable than when it dries under heat.

Experiments on the behavior of different paints for ironwork seem to show that red best resists the action of the atmosphere.

A good paint for sheet iron is made of varnish and boiled linseed oil, equal parts; add enough red lead to bring to the consistency of ordinary paint.

A good black paint for ironwork, farm implements, etc., is made by mixing two quarts of coal tar with one pint of gasoline. The gasoline thins it nicely, so that it spreads evenly. Gasoline evaporates rapidly, and if the work is not quickly finished a little more may be added to keep the proper consistency.

To protect iron from rust use red lead mixed pretty stiff with boiled oil. For small work a little Japan dryer may be added and perhaps 10 per cent. of litharge, so as to make it dry quicker and harder. If a bolt is going through wood, coat the hole with the lead and paint the bolt, and there will be no rusting. If a piece of iron is going into some place where it cannot be washed, clean it well and then paint it with two coats of red lead.

For a good fence paint take skim milk two quarts, fresh slaked lime eight ounces, Spanish white three pounds. The lime is to be slaked in water exposed to the air, and then mixed with abour one-fourth of the milk, the oil in which the pitch is dissolved to be added a little at a time, then the rest of the milk, and afterward the Spanish white. This is sufficient for about twenty-sepen yards, two coats. If any other color than white is desired use the color in place of a part of the Spanish white.

Whitewash may be put on with the spray pump provided the wash is thoroughly strained before pumping; otherwise particles are apt to clog in the pump. The work is rapidly done and the wash is forced into crevices where a brush could not reach.

For an outside whitewash take a clean, water-tight barrel or other suitable receptacle, and put into it a half bushel of lime. Siake it by pouring enough boiling hot water over to cover it five inches deep and stir briskly until well slaked. When thoroughly slaked, dissolve it in water and add two pounds of sulphate of zinc and of common salt; these will cause the wash to harden and prevent its cracking. For other colors than white; for cream color, add three poands of yellow ochre; for pear,, gray or lead color, add lampblack; for fawn color, add four pounds umber, one pound Indian red, one pound common lampblack; for common stone color, add four pounds of raw umber abd two pounds of lampblack- Before mixing the lampblack dissolve it in vinegar.

For preserving fence posts paint them with a mixture of boiled linseed oil and pulverized charcoal of the consistency of paint. Neither time nor weather will affect them. The one giving the recipe says : "I would as soon have poplar, basswood or ash as any other kind of timber for fence posts. I have taken out basswood posts after having been set seven years that were as sound when taken out as when put in the ground."—E. I. Locke.

The Use of Fertilizers.

That reliable fertiiizers will not exhaust, but on the contrary, will build up the poorest land into highest productiveness, has now been proven beyond cavil or doubt. The writer has used only chemical fertilizers for over 30 yegrs, and those who adopted his system of fertilization 20 years ago are now corrobating his experience. In apples, the crops have been most satitfactory. There have been no off years, and the fru;t has always been of first quality. While the crops have not been surprisingly large, they have been good compared with the quantity of fertilizer used. A larger quantity would probably have insured heavier crops. This now being tested The quantity used has never exceeded $8.00 or $9.00 worth per acre, or less than 8cts. for each barrel of apples packed. During the past 10 years there have been an average yield of 110 bbls. of packed fruit per acre which means 1100 bbls. from every acre under cultivation during that period. On a valuation of $1000 per acre the fruit has paid all the expenses incident to its production, and left for the owner a surplus of from 14 to 17½ per cent. Others report heavier crops than any I have grown, but large crops are often followed by a year of comparative barreness, it is the long steady pull that counts.

Below is a brief report of the only 4 acres in full bearing for 1908. The balance of 30 acres is still in various stages below full production. The crop of 1909 is equally good, but at this writing has not all been realized on.

Pruning	$ 10.00
Fertilizer for 4 acres at $9	$ 36.00
Hauling and sowing fertilizers	2.00
Discing 4 times at $2	8.00
Vetch 2 bushels at $2.10 ...	4.20
Buckwheat 2 bus. at 75c.....	1.50
Sowing cover crop	1.50
Spraying 3 times	22.40
Bbs, 451 at 25c	113.00
Picking, packing and trucking at 25c.	113.00
Sundries	4.80
Total expenses	320.00
451 bbls. apples, net proceeds	1017.74
Balance	697.74

This is about 17½ per cent for the owner on a valuation of $1000.00 per acre, and reckoned as though all the work had been done by hired help. There are many orchards doing much better than this, and solely because they get better care; but this moderate result shows most clearly the possibilities of scientific orchard culture in the Annapolis Valley.—G. C. Miller, Middleton, N. S.

Aphis of the Apple Tree.

The past two seasons have seen an unusual outbreak of plant lice on trees of all kinds. The chermes on the spruce seem to have been very successful in their growth. The broad.leaved trees of the forest hape also been widely attacked by plant lice and most noticeable of all has been the increase among those attacking the apple. Two species have more because they have to be dug by They will probably cost a little hand as there will not be more than 50 per cent. of the tre?s in the been especially common: aphis pomi and schizoneura langifera. Aphis poma is our common green plant louse on the apple trees during spring and summer. It has had many another scientific name, the most common of which is Aphis Mali. It has been steadily on the increase during the past four or five years. Indeed, I urged fruit growers in many localities then to spray for this insect where it was common, but not yet abundant in their orcharks. But they did not think it serious. By some I was taken to task for even suggesting such a thing.

Its life history is not briefly told. The first lice in spring hatch from eggs which have lived over winter. These lice are all agamic females, which in turn give birth to similar females, usually without wings at first but later with wings. This is kept up till late in summer when males and egg-laying females are produced. The eggs are laid on the young branches, and greenish at first soon turn to a glossy black.

The lice feed by inserting their beak through the epidermis of the leaf and sucking the juice.

Frost is fatal to them as in any strong alkaline spray as soap or kerosine emulsion. Poisons do not kill them when sprayed on the plants as they do not eat the leaves but only the juice. They multiply so rapidly that even when most are killed the few which escape soon supply their places with as many more. As they feed they cause the leaf to curl over so as to protect them.

However, many insect enemies find them out and destroy them.

The other common plant louse on the Apple is schizneura langitera, the woolley aphis. This is not easi'y killed by frost and the young pass the winter alive and ready to perpetuate the species in the spring. As the insect approaches maturity it secrets a white down on the back of the abdomen, which gives it its common name—"woolley" aphis. The young which live through the winter do not possess this down till spring. It does not afford protection from the cold. It would afford interesting information to know the particular purpose in nature it does subserve.

These lice live also on the roots of trees. There is a western species which live on corn and on the roots of corn, and for which the ants show considerable solicitude. They carry them from underground in spring and place them on the young corn plants, and carry them to the roots of the plant in autumn. This species is more easily contro'led than those attacking the apple.—Prof. H. W. Smith, Truro, N. S., im Maritime Students Agriculturist.

Planting the Orchard.

In preparing to set out an orchard we would select a field affording natural drainage and, if possible, natural shelter; that is, if one has a grove or hedge on the farm to take advantage of, as a shelter for the orchard, for there is not much use growing fruit and having it blown off by the heavy autumn winds. A row of cherry trees planted thickly around the outside of the orchard would make quite a good windbreak and prove a source of profit as well. We would also plant an evergreen hedge outside of all and, if fruit trees and evergreens were set out at the same time, the shelter would be sufficient by the time the trees had fruited.

A good preparation of the ground would be to plow and harrow, then sow with peas or buckwheat, and when it had grown up sufficiently, to plow it down. This would make the ground mellow and provide an abundant supply of the best kind of food for the roots.

smoothing it, lay off the orchard in

After pulverizing the soil and rows each way, at whatever distance the trees are to be planted. Set up the trees are to be planted. Set up stakes in line and plant where the lines inteesect. This will leave the trees in line every way and will facilitate working among them. When pail of water, as the clay will adplanting the trees dip the roots in a here quickly to the wet rootlets and facilitate speedy growth. For years hoed crops may be grown between the rows of trees, if plenty of manure is used; the trees can thus be cultivated with profit. Late in the fall the young trees should be wrapped about the trunk with building paper to the height of abbut eighteen inches to protect them from being girdled by mice. This is about the way we set out our trees and we have never yet had an apple tree fail to grow. If every farmer in Prince Edward Island could be induced to plant five acres of orchard the exodus would stop and we would double our population in fifteen years.—A P. E. Islander in Canadian Horticulturist.

Selection of Nursery Stock.

"Every fruit grower should be able to tell at a glance what age a tree is when it comes to him from the nursery," said Prof. J. W. Crow, when discussing the above subject at the short course in fruit growing at Guelph. "Every tree has on it marks which show plainly how old the tree is. The terminal bud of a branch is a ways protected during winter by a number of scales. In the spring the buds continue the growth of the tree and the scales drop off, but the scars remain and form a distinct ring around the limb or trunk, marking each year's growth quite plainly unless removed by cutting. Thus a tree one-year-old will show no ring of scars; a two-year-old tree will show one ring of scars at the junction of the one and two-year-old wood; a threefyear-old-tree will show, two rings; and so on,"

At the beginning of the second year the nursery-man cuts back his apple trees and trims them to the desired height to form the head. If he sells the tree at two years old well and good; if not, he may let it grow but more likely he will cus it back again to keep the head from getting too big. This means that he will remove practically all the last yeas's growth. Thus a year can be added to the age of the tree for every time the knife has been applied. The marks of the knife are always evident. A tree that has stood continuously in the nursery row for three to five years, as not unfrequently happens with certain varities or when trade is slow, does not transplant with such certainty of success as does a one or two-year-old tree.

One-year-old, well grown apple trees are preferable for planting. In the first place they must be sturdy stock in order to attain the right size in a year. Then it is much easier to head a one-year-old tree low down than it is a two or thcee-year-old. These older trees gre usually headed about three feet from the ground which is too high. A low-headed tree is preferable because the limbs tend to a more upright habit of growth, sun-scald is almost entirely confined to high, open-headed trees; it is much more economical to prune, spray and pick the fruit from such trees.

Before planting a considerable number of trees it will pay well, if convenient, to visit the nursery and choose your own stock. Choose one-year-old trees not less than 30 inches high. If you insist on having one-year-old trees you will ges them.

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nursery row fit for your purpose. Do not buy poor one-year-olds, as it is necessary with these to cut them off nearly at the ground in order to stimulate strong growth after they are planted.

Peach trees are nearly all sold at one year old. It does not pay to buy big No. 1 stock. Medium-sized No. 2 is better, as it transplants with greater safety and makes a better tree for low heading. If possible, buy peach trees with all their branches on them. Thus you will be able to head your tree just where you like. This will probably mean giving the nurseryman instructions a year ahead but it will pay.

It is good practice to grow your own nursery stock. Grow your seedlings or procure them from a nursery. Plant them in the spring in rows and cultivate as you would potatoes. In July bud these with buds taken from the very best bearing trees of the very best varieties in your locality. A very little practice will make any intelligent man a competent hand at budding as the process is simple. If you do not care to grow your own stock, buy trees that will make good stock for grafting, such as Tolman or McMahon; after these have been set two or three years top graft with scions from the very best bearing trees of the desired variety to be found in your locality. There is as much individuality in a tree as there is in a dairy cow. Select your trees as you would select your dairy cows by breeding from the very best individuals you can find. The nurseryman cannot do this as he must select his scions wherever he can get them; but the fruit grower can easily mark the trees in his own or his neighbor's orchard that are giving extra big returns and can secure scions from these trees.—D. S.

I prefer to disturb the asparagus bed in the fall rather than in the spring, especially a belated spring when the growths peep up almost before the snow is gone. About last work in the garden in fall, when asparagus growths are yellow and the sap returned to the xcrowns, cut close over and burn. Remove a couple of inches of soil or more from the surface. This takes away sour soil and insect eggs. Apply a dressing of well-spent manure and soil mixed and over this, six inches of strawy manure or leaves with branches to keep it down. This provides the winter garment.

At the end of April, weather favorable, remove the straw and tidy the bed. Keep it within the limits by the spade on each side. Slightly fork over the surface; a spade should never be used, for the roots have ransacked the soil in all directions.

With the approach of mild weather give a dressing of salt—about one pound to each ten square feet at intervals, say May 15, May 30 and June 15.

We generally cut about May 10 and continue until June 20. Short, stubby stalks about six inches long are the best, measuring three-quarters of an inch to one inch at the base. Cut these as far below the surface as possible. Tie in a bunch and cut the ends even.

Allow a fair proportion of growths to come up to strengthen the crowns for the succeeding season.

Seed can be saved in the fall when red, sown in spring in drills two inches deep and thinned to six inches allowing them to remain two years prior to planting.

The asparagut is valuable not only as a vegetable, but also as green material for decorating flower vases, and so on. It adds a charm to cut blooms. The side growths are best. No harm is caused by the cutting.
A. V. Main, in Canadian Horticulturist.

That Red Rose Tea is of surpassing quality is accepted everywhere it is used as an undisputed fact, but it is in the Maritime Provinces especially that it has by unvarying goodness so well earned the term "is good tea." 61

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LIVE STOCK.

Developing Pure Bred Stock

It is an axiom among stockmen that two generations of poor feeding will ruin the best of meat-producing animals, writes Wayne Dinsmore, of Iowa State College. Lack of feed brands its imprint on the animal, even before birth and alters both form and function. Investigations by Walters go to indicate that poorly nourished animals tend to become narrower and taller than those well nourished. Such alteration in form and function is not wholly overcome by the latter liberal feeding. This is in line with the general experience that animals once stunted never reach a normal development. Men of experience in developing show animals are frank to admit that there are thousands of possible winners yet undeveloped. One breeder, who has neveloped and shown many calves from a well known sire, expressed his opinion thus: "I beliepe that I can take almost any calf from this sire and make a showyard winner of him. All they need is feed and opportunity." There are many animals possessing latent possibilities as record-makers that are never heard of because they are not fully tried. Opportunity means much to animals as well as men.

It is well known, however, that many showyard prospects fail although given all possible feed and care. The fault sometimes lies with the feeder, who has erred in feeding too much, or in giving wrong feed, but it as often lies in the animal. A weakness of constitution or of digestive system may be present, unsuspected until brought out by test. It is generally conceded that improvement in our domestic animals has come chiefly through the selection and breeding together of those animals which most nearly approach the breeder's ideal in meat or milk production, or in work. In the progeny of any sire, out of a uniform lot of females, there will be many that will never equal the sire in his points of excellence. Many others on maturity will be about equal in merit to the parent stock, and some will surpass the sire and dam in the desired features if they are permitted a full development of inherent tendencies. Approximately 50 per cent. may be expected to be equal to or better than the sire, if the dams are equal in merit. The remaining 50 per cent will fall below the level of their parents.

Inasmuch as improvement has come by selecting and breeding together those animals which most nearly conform to the breeder's ideal it is evident that the most rapid progress can come away only by rejecting all animals not up to the standard of the parents, and by using for sires only those males which markedly excel the herd sire in the desired points. A considerable number of the inferior progeny of each generation can be sorted out and discarded while still young; but those that will be nearly equal to, and superior to their parents cannot be accurately divided until they have been given a full opportunity to develop and have approached maturity. Those that have varied most in the desired direction, surpassing their parents in such desired features as greater size, earlier maturity, thicker flesh, greater milk production, or power to do work, can then be reserved and used as the foundation stock for the next generation. Definite, rapid progress will result from such a policy for each generation means an actual advance, be it small or great. The elimination of all animals that fail to reach the standard of the parents will simplify the work of the breeder, and will enable him to concentrate his efforts on the main problem.

The full development of breeding stock prior to selection is necessarily an expensive proposition, for it means a policy of very liberal feeding from birth until the animals are nearly mature. When applied to two-thirds of the animal crop it means that much capital will be tied up for a considerable length of time; and it is seldom possible to weed out more than one-third of the annual production of young stock, with an assurance of their falling below the level of the parents at maturity. With the rest it is necessary to wait and see what the outcome will be. Full development of the anumals is necessary, for without this such desired characterissics, as early maturity, great wealth of natural flesh, strong digestive powers and other similar features will not be brought out. Canada has many stock breeders, but a very limited number of great improvers. The men are few who are producing in each generation, animals that are a distinct advance on the parent stock. More creative breeders are needed, who have the ability to select firstclass foundation stock, the means to carry the progeny to a full development, and the resolution to refuse to price the animals which show a distinct advance in merit over the parent stock.

Have A Pig pasture

The cheapest gains on growing pigs can never be made by a grain ration only. The pig is naturally a forager, and by all means the most economical way to make summer gains is to have a pig pasture and allow the animals to gather a goodly portion of their own living.

For a permanent pasture, if it can be had to succeed, one of the best things would no doubt be alfalfa. Any of the clovers, also, would do very well. The high percentage of nitrogenous content in all of these especially adapts them to flesh formation. Of the grasses, brome is the best for pigs, as it remains green and tasty during a longer period of the season than any of the other grasses.

But, after all, probably the best results can be had by sowing an annual crop. For early spring grazing nothing can beat fall sown rye. A little later, wheat or oats—or possibly wheat and oats mixed—will produce splendid feeding, and will take only a small patch to keep a large herd of pigs. Then, for the latter part of the season, peas and rape are excellent. Rape will grow more feed on an acre than peas, but peas do very well in this country, and the pigs will grow faster on a pea patch than on a rape patch unless a fair amount of grain is fed with the rape. But the pea crop to be so used should be sown on a clean piece of land. Otherwise the weeds will have a good chance to multiply. Wild oats would delight in such a chance, and so would thistles and almost all other weeds.

The pig pasture is pery much better if it provides a run to a slough or stream, but so long as there is a good troughful of water in the lot all the time this will not be so important. There should also be shade, but it is an easy matter to erect a season.

temporary shelter or two by putting up a few boards in such a way that they will both furnish shade and keep off the rain.

The problem of fencing may make it compulsory to confine pigs to the same lot year after year. Otherwise, it were better to move them about putting them on to new ground each season.

Of course, while green feed helps to make cheap grain, is should not be depended upkn entirely. The best results are attained when green feed and a small amount of grain are given. in combination. It is much better still if a small quantity of skim milk is added to the feed.

The Mutton Sheep

To form a basis for estimating the good and bad qualities of sheep, it is best to consider the carcass and that from the point of view of the butcher. The different parts of the lamb show a wide variation from the butcher's standpoint.

The most valuable meat is found over the back, loin and hind-quarters. The butcher, therefore, requires a broad back, a broad full loin and a heavily fleshed leg of mutton. The shoulder is not so valuable as the cuts farther back. The neck is a cheap part and is valuable according to thickness, but since it sells for little it is not important to breed for neck development. On the other hand, a thin neck is to be avoided because such indicates weakness of constitution, and a thin neck usually goes with a slenderness of body. The neck, therefore, should be short and thick, which condition is likely to characterize the entire carcass.

The carcass is usually divided by the butcher between the second and third ribs. The first part is worth about two cents a pound less than the hind part. It, therefore, follows that from the market standpoint the development of the back, loin and hind-quarters must be kept in mind. In all the parts smoothness of conformation is important. Roughness or angulariry invariably go with bareness of back and an excess of bone in the carsass. A rough sheep is usually very open at the top of the snoulder, showing a pronounced depression between the shoulder blades. This part for six or seven inches should be flat and well covered with flesh in a fatted sheep. The ribs shou,d show good spring and be well covered with firm flesh. The backbone should not stand prominent at any point in a sheep even in only moderate flesh. A groove over the spinal column frequently seen in well fleshed sheep is not objectionable, although flatness and smoothness are rather to be preferred. While a full, fleshy loin is most desirable a high arching loin is not the formation to be looked for and perpetuated. The level, smoothness recommended for the shoulder and back over the ribs should characterize the loin. A high loin is inclined to be bare rather than fleshy, or the loin may appear high in comparison with a low, sagging back which is always to be condemned as bad formation.

The loin should have width and thickness in order to yield a good quantity of flesh. Among the common flocks of the country drooping rumps are frequently seen. This is most undesirable, whether the falling away is towards the tail, head or down the thigh. The hind-quarter should continue straight and full both on the top and side lines. From the hip to the hock a sheep in good flesh should be especially strong. Not only the "leg of mutton" be plump and full with muscle on the outside, but between the legs in the twist, the flesh should fill well down to the hock, compelling the hind legs to stand well apart. When grasping the leg of mutton on the inside a decided plumpness should be found in a mutton sheep.

The Purebred Herb

It is now nearing the century mark since the improvement of the cattle in Canada began, and in looking over the past, showing something of the difficulties, the discouraging experiences and the many mistakes that have been made by the most

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4th.—Because selling separators can be done at odd times without neglecting farm work.

5th.—Because the makers of Empire Cream Separators stand behind every machine.

6th.—Because there is no fault-finding after machine has been placed.

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A neighbor advised us to try MINARD'S LINIMENT, which we did, and within three days my child was all right, and I feel so grateful that I send you this testimonial, that my experience may be of benefit to others. LOUIS GAGNIER.

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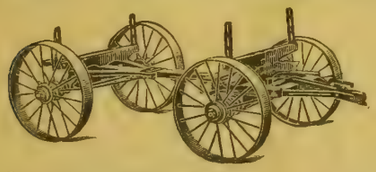

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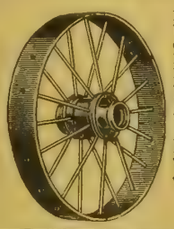

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successfhl, we do not wonder that there is still much to do.

The lesson learned by such experiences were necessary that we might know how to avoid errors in the future, but many have them to learn yet, so I am writing this to try to teach those that prove apt scholars in a way that will nos cost them so dearly as has the education of many of us that have for years given our time and our ability to the work.

Perhaps the chief mistake that has been made by those who would be cattle breeders or improvers was that of wishing to found a herd and make from it a profit the first and each following year, regardless of the effect on the herd itself. More of us have been cattle dealers or speculators than real breeders as the term should be applied. Many herds have been well started, perhaps with intentions good enough, to cootinue for a lifetime but the desire to get some returns seized the man and these was no gainsaying that desire until it was sasisfied. Many such herds have been weakened by the best being sold because they could be sold the easiest and for the most satisfactory prices; this policy is difficult to stop. There can be but one result, the owner of the herd handicaps himself in such a way that he can never be in the race, and his herd becomes commonplace, he becomes discouraged, and the herd is dispersed without attracting attention of breeders and with poor results to the owner.

Another experience that has been a common one in Canada, and, I presume all countries where cattle are bred, is that of buying good females, paying for them with a liberal hand, but failing to get a head for the hesd that is suitable. How often do we see this happen? Some of the best herds in the land have been literally spoiled in this way. Every man with a bit of necessary instinct to make a breeder knows that a good bull is half the herd, and it has been said more than once with a lot of truth that a bad bull is the whole herd. It is impossible to account for the failure in so many instances to provide the sire worthy dams with which he is to be mated. This mistake applies to the breeder of commercial catt,e as well as to the breeder of a pure herd. I cannot account for it, nor have I seen a man that could. The first sire used should be as good as you can get, the following sires should be better than the first, for the more difficult it is to further improve it. The best herds in the land are hard to improve, they are even hard to keep up to their present standard, because of the difficulty in getting sires that are better than the herd. The two most successful breeders in Great Britain have the most trouble in finding sires for their herds. Price is no object with them, but the form must be there, and it must have been there for many generations in every branch or the defects will show up in the offspring, and a decline instead of improvement will take place in the quality of the herd. A herd of cattle long established, bred for many generations by the same man, with the same object, must, if good judgement is used become valuable and impressive when used on other herds. If bred with poor judgment, the longer time they are thus bred the more dangerous they become, for they wi,l have as much influence for bad as in the former case for good. The first way is what makes a good pedigree worse than none.

A third and costly mistake id often made in buying the foundation females. The usual way is to buy one from each of the different herds or from some man that has collected them from different herds. Earh one has perhaps been bred by skilled men, but with different ideas and they may be of different types, though all of recognized good types, each would perhaps in such a case need a different sire to suit them. The man to succeed with such a herd would require supernatural ability, something that cannot be found and should not be expected in an ordinary mortal. In time he mey get control to a certain extent, but a better way would be to buy the females from one herd as in this way one is more likely to get animals that have been bred with a definite purpose in view.

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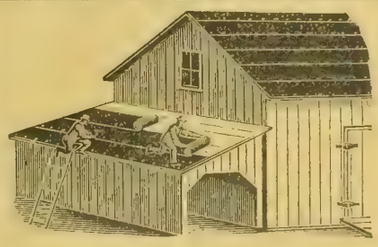

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DAIRYING.

The Paying Production of Milk.

The paying production of milk is what determines the value of the dairy cow and in order to obtain good paying results, proper care and attention must be given the cow which supplies the milk. Cleanliness is perhaps the first important factor to be considered and should be considered from all standpoints.

The stables wherein the animals are housed should be well taken care of, in fact so well taken care of that the attendent who enters at the time of milking shall find no disagreeable oder, no damp floors, no dusty feed, as all feed having a tendency to give rise to dust should be carefully sprinkled before feeding the animal; allowing the animal plenty of fresh air and sunlight.

The cleanliness should not be limited to any one source but should be an important factor from all standpoints. The milker should use utmost care, seeing that the garments as well as the hands are in a nice, clean condition and exercising judgment in the care of the animal to be milked, seeing that all milking utensils are well taken care of and the milk placed where it will have access to proper cooling conditions and in this way add to the profit of the product.

The dairy cow is either a money maker or a money loser. If she is in a good, healthy condition and her milk supply profits counteract her actual expense of keeping, she is worth the time and trouble of keeping, but, on the other hand should she consume more feed than her profits warrant, get rid of her as there are too many profit producers to be obtained to waste time experimenting, nevertheless it should be remembered that when an animal supplies products beyond the necessary amount for sustaining life, it should be fed accordingly, thus preparing the animal to create vitality in order that it may give in return profits due the owner.—Dr. David Roberts.

What a Silo Can Do.

The April issue of the Blue Valley Bulletin, which is published monthly by the Blue Valley Creamery Company of Chicago, for the benefit of its patrons, contains, along with a lot more sound advice on economical milk production, a short editorial entitled "Why you need a silo," which appeals to us as exceptionally timely. Of course silo advice is never out of season, for the benefits of a plentiful supply of ensilage extended over the whole twelve months of the year; but when the subject is put up to the non-silo user in the spring he has every opportunity, if converted, of reaping the full benefits of his conversion before another fall.

The list of arguments used in the Bulletin to win over the Blue Valley patrons are worth repeating for the use of those creamerymen who are preparing to talk silo this season. We condense them as follows :

The silo will (1) enable you to increase the amount of stock you are carrying on the farm, (2) increase the production and decrease the cost of milk and butterfat, (3) prevent shrinkage in milk flow incidents to late summer and early fall, when pastures are short and dry, in the most economical way, (4) keep up the flow in winter when butterfat is highest, (5) put in palatable form and save about forty per cent. of the feeding value of corn which is often wasted, (6) enable the farmer to get more fall plowing done, (7) keep the aggravating corn stalks out of the manure, (8) save drudgery in feeding (9) keep young ssock healthier and (10) bring the old stock through the Winter in much better condition than if wintered on dry feed.

The arguments are not copyrighted and we hope our buttermaking readers will find use for them.

Profitable Stock.

We are daily coming in contact with the products of the dairy cow in one form or another, thus it is to the interest of the owner of the dairy breed of cattle to carefully select animals when laying a foundation for his herd, which will yield him the best profit, not only selecting animals which are from a good healthy stock but animals which are good profit producers, or in other words, that yield a flow of milk, containing sufficient butter fat, to warrant the animal worth the while of keeping upon the premises. lb

While it is always essential that animals be well fed and cared for, it is oftentimes found that the animal producing the largest amount of milk is not necessarily the animal which devours the most feed and for this reason the owner should learn the temperament of each individual animal and feed it accordingly, in this way realizing profits which might otherwise be wasted..—Dr. David Roberts.

Testing Facts.

Editor The Maritime Farmer :—

Every little while facts come to light which speak in far reaching tones of the value of cow testing to the dairy farmers.

For instance a letter is just received at the Department of Argiculture, Ottawa, from Mr. George Wise, of Shellmouth, Man., which reads as follows :—"I am pleased that I was led to see what my cows are doing, though now only just entering my second year of recording each cow's doings I see there is a great difference in the returns from the creamery and of course it is there we we should find the change. Note the remarkable gain for the first four months of 1910. In 1909, from January the 1st to April the 30th, we were milking 9 cows and received $129.59 for cream sold. In 1910, during the same period, we milked only eight cows and sold cream for $229.43. Further, we made butter this year for a household of nine persons, last year we bought our butter. These are actugl facts. The only difference in feed from last year is that I have fed bran, extra all winter, bur I have sold cows that were poor ones, though one of them made a good showing the first six months of the year. The cows picked up wonderfully on a soiling crop in September, the returns show it and every animal went into winter quarters fat."

It will be noted that Mr. Wise, besides the butter used at home, made an extra hundred dollars in four months with a smallez herd. The cows are being selected, the records show which cows to keep and the fact that records are kept induces the owner to look after the herd better in every way. Cow testing pays.—C. F. W.

Advice to Young Dairymen.

If the individual dairyman wishes to improve the dairy qualities in his herd or provide for a herd which will give him a better income year after year he can go about it in two ways. He can, by the aid of his records from the cow testing association, select his best cows to head the herd, and by breeding them to good sires with dairy qualities, be reasonably certain to obtain young animals with dairy qualities. The heifers of such breeding are used to replace the poorer cows in his herd and in a few years he will have a herd which will produce much more net profit for the same labor and feed.

The second way is to buy from reputable breeders dairy cows of known qualities or young heifers of good breeding. But the price asked for such animals, while it may not be exorbitant is usually more than the average farmer is willing to pay and he will find that if he wants good dairy cows he must raise them himself. And his success will depend on his realization of the great law in breeding that "like begets like or the likeness of an ancestor." Just as surely as the good dairy cow as a rule produces offspring as good or better than herself, so surely must he expect offspring without dairy qualities from the poor dairy cow. For this reason he must choose only his best dairy animals for mothers of his future herd.

The systematic dairyman fixes minimum production as a standard of excellence in a mature cow, and while one is content if a cow produces 250 pounds of butter-fat in a year, another wants 300 pounds and selects only cows capable of such production for his mother cows. In every case the cow must be bodily sound.

But the certainty of inherited dairy qualities in the offspring does not depend upon the good qualities of the mother alone. We can only be reasonably certain when she has been bred to a sire whose ancestry shows the same good qualities which we wish to produce. When the dairyman buys the bull he has at the same time chosen the breed he wishes to work with as well as the type he wants to reproduce in his herd, and for this reason he should choose with care and deliberation. In case the herd is made up of cows of mixed breeding the bull will exert an influence on the offspring of more than 50 per cent. But as with the cow so with the bull. His value is not known until he has been tested. One must see his offspring and know their qualities before one can know his value, and many bulls have been killed before their value was known.

Members of cow testing associations have an opportunity to exchange bulls whenever it is necessary to dispose of them, and in this way the ruthless slaughter of young bulls in their prime of usefulness is prevented.

When the type has been established in a herd, it is also desirable that the sire and the dam be as nearly alike as possible, in which case the sureness of their ability to reproduce their good qualities in their offspring is increased and retrogression is guarded against. All of which goes to show that it is necessary to have a fixed plan if one shall realize the most out of his work for better animals. The improvement is greatly retarded if the cows one year are bred to a Jersy bull and the next year to a Holstein or Shorthorn or any other breed, and improvement cannot be expected at all if the cows are bred to bulls of unknown breeding or ancestry. That sort of breeding or crossing should be discontinued, and the sooner the better.

Breeding within a certain breed is always to be preferred.—Michigan Bulletin.

Securing Quality in Cream.

This is ts the time of year when the creamerymen have difficulty in securing first grade cream. The trouble is due both to the way the cream is cared for and the length of time it is held before delivering. Often when a few cows are kept there is a tendency to hold the cream for several days before delivery, especi-

Excels for making

PURITY FLOUR

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If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment ; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Chamberlain's Stomach and Liver Tablets gently stimulate the liver and bowels to expel poisonous matter, cleanse the system, cure constipation and sick headache. Sold by all dealers.

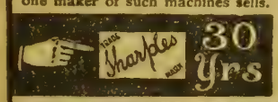
GET OUT QUICK

That is what happens to disk filled and other common, complicated cream separators when farmers try them in comparison with simple, sanitary, easy to clean, wear a lifetime

Sharples Dairy Tubular Cream Separators

Why? Because common, complicated machines are out of date with their top heavy bowls containing 40 to 60 disks or other parts as hard to clean. And because Sharples Dairy Tubulars have suspended, self-balancing bowls containing neither disks nor other contraptions, yet produce twice the skimming force, skim twice as clean, skim faster and wash several times easier than common separators. That is why farmers all over the world call Tubulars "The World's Best".

The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.



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TORONTO, ONT. WINNIPEG, MAN.

CreamSeparators
At Half Price.

We wish all who need a Cream Separator to read the following letters, which speak for themselves.

Lock sley, Ont., May 11, '07. Windsor Supply Co.; Gentlemen: Please find 30c for which send me India rubber rings for No. 2 Windsor Cream Separator. My Separator has been in use for four years, and still gives as good satisfaction as it did the first day we used it. Yours truly, T. Hamilton.

Thornhill, Man., July 27, 1909. The Windsor Suppy Co. Dear Sirs:—You will wonder if I ever received my Separator. I wanted to give it a good trial before I wrote you. I find it **does good work.** We like it real well I am, yours truly, Mrs. S. White.

We receive scores of letters like the above from all parts of the Dominion. Send for circular, giving full particulars by return mail. All orders filled the day received. Our prices are as follows :—

No. O. cap. 100 lbs. milk per hour.....$10.00
No. 1 cap. 210 lbs. milk per hour..... 25.00
No. 2 cap. 340 lbs. milk per hour..... 30.00

N. B.—We have in stock a few No. 1 and No. 2 Separators, which have been used only for a short time, and then exchanged for larger machines. These we are selling, while they last, at the following very low prices, for cash with order only :—No. 1, $14 00; No. 2, $16.00 These machines are all practically as good as new, and all will do perfect work, skimming as close as any separator you can buy at any price, but of course they do not look like new, nor can we sell them as new machines. We advise those who wish a first-class Cream Separator almost for a song, to order one of these. Times are hard don't be humbugged by agents into paying big prices any more for Cream Separators. Address,

Windsor Supply Co., Windsor, Ont.

Build Concrete Silos

Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements.

London Concrete Machinery Co., Ltd, 19 Marmora Street.
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Largest Manufacturers of Concrete Machinery in Canada.

ally during the busy seasons. This frequently results in cream of very poor quality.

Few people fully realize the value of cooling cream immediately after milking and holding at a low temperature until delivery. When drawn from the cow the temperature is about 98 degrees F., which is ideal for the rapid development of those bacteria that produce bad flavors in the milk and cream. This is called the "critical period" and it requires but a very short time to develop enough bad flavors to make the cream grade second or third quality.

But if the cream is cooled to 60 degrees F., or lower as soon as possible after separating and so held, few bad flavors will result. The important thing is to cool quickly and the most practical way for the average farmer to do it is by using water. The average well water is close to 50 degrees F., and if a small vat is placed between the well and the stock tank, so that the water when pumped will run through it fresh cool water may be kept around the cans. It is best to use shot-gun cans for containing the cream, as these cool the cream much quicker and can be placed in the vat more conveniently. Stirring will hasten the cooling of the cream by liberating animal heat and bringing the warm cream in contact with the sides of the can. The cream usually will not cool down to equal the temperature of the water, hence the necessity of cool fresh water around the cans.

Another very important thing to avoid is mixing warm cream with that previously separated. There is a strong tendendy to do that especially where hand separators are used and only a small amount of cream is produced each day. It warms the cool cream sufficiently so the undesirable bacteria begin to work and, after this is repeated several times, the cream is sure to be poor in quality.

Usually the price for butter-fat is fixed according to the quality of the cream. When there is a difference of from 1½ to 2 cents per pound for butter-fat from first grade cream it is greatly to the patron's advantage to take the necessary precautions to deliver a first class article. With a creamery averaging 20,000 pounds output per season, and the product selling at least 2 cents per pound below market quotations for first grade butter, they will lose $400. If the quality of the cream is not first class when delivered, it is impossible by the best methods of manufacture to make a first-class product consequently it must sell at a great disadvantage on the market, and in the end the producer is the heaviest loser. Quality should be sought for and must begin with production.

How do You Judge a Dairy Cow.

Editor The Maritime Farmer :—

A dairy cow is often judged by the scale of points of the breed to which she belongs. Another method is to rate her according to her general appearance and the external indications of milking powers; appearances are sometimes deceitful. Recently a farmer near Ormstown, Que., sold five cows at $25 each, saying they were no good as dairy cows. The purchaser found to his great satisfaction that one gave him 10,000 lbs. milk, and another 13,000 lbs. Sometimes a cow is valued because she is easy to keep, or she is a docile family pet. Coming nearer to the practical test, a farmer may judge his best cow to be the one that daily gives a couple of pails full of milk in June; though she may quickly decrease in flow, the remembrance of that big yield sticks in her owner's mind and she is undeservedly ranked too high. Or she may have earned a wide local reputation just by one isolated test for fat very likely higher than normal. On the other hand a cow that gives only a moderate yield but attends strictly to business for a reasonably long milking period will probably prove the most paluable. Again there nay be some general idea of production, but totals that are only estimated are generally in excess of the actual yield.

The positive proof of value is certainty of the cow's ability to produce milk and fat economically; the generous minded, unselfish, real dairy cow, independent of strikes and lockouts, works full time, and returns a handsome margin of profit above the computed cost of feed. The one infalliable test is a record of the production of each cow for the full period of lactation. Don't average up the herd, ascertain that each cow is a specialist.—C. F. W.

The Magnet Cream Separator

s **entirely different in its construction and is better** than any other cream separator.

It is built

MECHANICALLY CORRECT.

MECHANICALLY CORRECT means putting the power on the machine by properly **graded steps** or gears When you see a very **large wheel** turning a **very small one,** it is a **violation** of **mechanical rules** and means wear, breakage and **trouble,** but is done to **save the cost** of the extra wheels of steps. The **Canadians** who originated the **MAGNET** were **educated mechanics** and could **not** be induced to apply the make shift, worm gear drive, adopted by makers who preferred cheapness in construction to durability. Use has shown that the worm gear drive soon wears, the bowl wobbles and then considerable butter fat goes into the skim milk at each separation. The square gear does **not wear** and the **MAGNET** skims as closely after twelve years' use as the first day it skimmed.

Do not take our say so, examine for yourself.

Take the **MAGNET** stand, it is **solid, strong** and **rigid,** constructed to **hold the gears without vibration** or **possibility of accident to anyone.**

Square gear drive is used, the only drive approved of for a **fast running** machine like a cream separator.

The shape of the **MAGNET** bowl is **different** from others being **longer,** enabling the insertion of the famous **one piece skimmer,** so constructed as to take out all the butter fat but a trace, at the same time **draws** out all **dirt and foreign matter** and holds the same to be washed off. This skimmer delivers **pure cream.**

Bronze bearings are used on the **MAGNET,** because being harder than steel they do not wear out.

Glass hard steel balls, extra large size, are used, will not wear or break.

The brake (**MAGNET PATENT**) circles the bowl, stops the machine in eight seconds, does not injure it.

The bowl is supported at both ends and cannot wobble or get out of balance (**MAGNET PATENT.**) All other separator bowls are run on one end, the vibration of which leaves butter fat in the skim milk

Every point in the **MAGNET** is a strong point, no weak spots.

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The Unique Food for All Stock.

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—SOLE IMPORTER—

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Variations in Cream Tests.

Circular 37 of the Missouri Experiment Station gives a short review of the more common causes of variation in the tests of rream, which will be found useful by those buttermakers who have more or less difficulty with cream patrons wherever the tests of their cream show sudden variation.

"It is impossible to run a separator under farm comditions without having variations in the test of the cream occur," says Prof. Eckles in the circular, "and in fact if the cream buyer should always give the same cream test, it would be more suspicious of dishonesty than when it varies slightly. Our experiments indicate the following to be the common causes of these variations , (1) Variations in the speed of the separator. (2) Variations in temperature of milk separated. (3) Rate the milk flows into the machine. (4) Amount of water ot skim milk used in flushing out the bowl. (5) Change in the richness of the milk separated. (6) Adjustment of the cream screw."

$11,000 in Valuable Prizes

Readers of the Maritime Farr

An Opportunity for Subscribers to The Maritime Farmer.

We have made clubbing arrangements with The Halifax Herald and The Evening Mail, whereby our subscribers can enter this contest and participate in the distribution of the handsomest array of prizes ever given by a newspaper or magazine in the Maritime Provinces. This is an excellent opportunity open to every one living in the territory in which The Herald, The Mail or The Maritime Farmer circulates. Read carefully all about this exceptional offer, and send your name to the Contest Manager at once and get full particulars.

Act at Once.

How To Enter The Contest

Send in your nomination. You will find a nomination blank printed on this page. The nomination blank is good for 1,000 votes, which gives you a fine start.

Then enlist the aid of your friends and neighbors. Use your telephone. Let everyone know that you are a candidate before they promise their help to a more enterprising candidate.

The first thing to do is to enter your name as a candidate, then either call, write or 'phone the Contest Manager, The Herald or The Maritime Farmer, Herald Building, Halifax, for a receipt book with which to secure subscriptions. Then let all your friends know you are in the contest and request them to save their votes for you.

Candidates may nominate themselves or may be nominated by their friends.

All special vote ballots issued on subscriptions are good until the end of the contest, and they may be voted at the discretion of the candidate or subscriber.

Votes are not transferable.

Votes will be allowed on subscriptions secured anywhere in Canada or the United States. But subscriptions must be paid in advance to secure votes.

The votes will be counted and canvassed by a committee of prominent citizens.

In case of a tie the prize will be divided between the contestants tieing.

Any questions which may arise will be settled by the Contest Manager of The Herald and The Maritime Farmer, Herald Building, Halifax, N. S., and decisions will be absolute and final.

Nominations must have address of the candidate.

Nominate a Candidate.

Nomination Blank—Good for 1,000 Votes.

GREAT PRIZE CONTEST.

—OF—

The Halifax Herald and The Maritime Farmer.

I NOMINATE.....

ADDRESS.....

'PHONE.....

SIGNED.....

ADDRESS.....

Only the first nomination blank cast for each candidate will count as 1,000 votes.

Cut out and send to the Contest Manager, The Herald or The Maritime Farmer, Herald Building, Halifax.

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Three Ford Touring Ca
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How Prizes Will Be Given

GRAND CAPITAL PRIZE

$2,400 RUSSELL TOURING CAR—For the candidate who secures the rgest number of votes in the entire contest.

Prizes for the Three Districts

$1,250 FORD TOURING CAR—For the candidate in each of the three stricts who secures the largest number of votes in their respective district ter the grand capital prize has been awarded.

MOTOR BOAT—For the candidate in each of the three districts who ecures the second largest number of votes in their respective district. The ighest among these three will be given choice of the boats.

UPRIGHT PIANO—For the candidate in each of the three districts who ecures the third largest number of votes in their respective district.

SUIT OF FURNIUURE—For the candidate in each of the three districts ho secures the fourth largest number of votes in their respective district.

DIAMOND RING—For the candidate in each of the three districts who ecures the fifth largest number of votes in their respective district.

BICYCLE—For the candidate in each of the three districts who secures he sixth largest number of votes in their respective district.

CREAM SEPARATOR—For the candidate in each of the three districts ho secures the seventh largest number of votes in their respective district.

GRAMAPHONE—For the candidate in each of the three districts who ecures the eighth largest number of votes in their respective district.

CANOE—For the candidate in each of the three districts who secures the inth largest number of votes in their respective district.

RANGE—For the candidate in each of the three districts who secures he tenth largest number of votes in their respective district.

CAMERA—For the candidate in each of the three districts who secures he eleventh largest number of votes in their respective district.

KITCHEN CABINET—For the candidate in each of the three districts ho secures the twelfth largest number of votes in their respective district.

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Map of Districts Will Appear Later.

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Our book—"A Treatise On The Horse"—free at your druggists or write us 49

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

THE HORSE.

Physicing Horses,

Mr. Patley Bridge, in the course of an article in Farm and Home, comments on the foregoing subject as follows :—

Purging like bleeding, has gone a good deal out of fashion, and in these days the chemist does not sell one physic ball where forty years ago he dold a score. Perhaps in the swing of the pendulum we neglect the aloetic ball as much as our grandfathers abused it. In an old book on farriery in our possession their occurs this passage :—Next to bleeding, purging is to be considered one of the most powerful modes of depletion, and therefore, it is obvious that purging is a useful remedy in all inflammatory disorders." The old-time horse doctor and cowleech was all for "depletion," and in bygone days a dose of physic used to follow a copious bleeding as a preliminary step in the treatment of almost all deseases, especially in febrile complaints, and it killed hundreds of horses that would have recovered kad they been left to nature and the nurse. Influenza, or "pink-eye," pneumonia, strangles, and kindred disorders, in which the febrile stage is quickly followed by extreme debility, were often fatal as compared with the results now obtained under a more enlightened system of treatment in which depletion plays no part, but the strength is conserved against the day of certainly ensuing debility. As a preliminary to conditioning hunters, and with horses, old and young, just taken up from pasture, a dose of physic was always given to "get the grass out of 'em," and usually the dose was a large one, and repeated once and sometimes twice at short intervals. Now rarely more than one mild dose is given, and frequently none at all—a course of bran mashes and a gradual introduction of the grain taking the place of the drastic purge Our forefathers dealt in hugh doses, and ten and twelve drachms of aloes used frequently to be administered to a horse. Now the five-drachm physic ball is the standard size kept in stock, and six drachms of aloes is considered amply sufficient for even a big horse, if it has been properly prepared. Dealing with physic in his "Notes for Hunting Men," the late Captain Courtland Gordon Mackenzie says :— "I am sure the less drugs either we or our horses take the better. Their use was at one time, like bleeding and other relics of barbarism, much too frequent; and even now most grooms have a sneaking liking for them. I always discourage them in my own stable, and never permit their being given without my knowledge. A mild dose of aloes is necessary when a horse meets with some injury which resaires that his system shodld be suddenly cooled, and I think it is desirable when an animal is quickly changed from a very high to a very low diet, and vice versa, but the constant or periodical giving of balls is, I am sure, an abomination, and will ruin any horse's condition." A common plea for the use of physic or the necessity for purgative medicine in the spring of the year is that it greatly contributes to make horses shed their coats easily, and "prevent many humors to which they are subject at this period," and although we may laugh at the "humors" and regard humoral pathology as somewhat obsolete, there is, perhaps some good in a moderate dose of physic where horses have been kept entirely on dry food and green food is not obtainable. But there is nothing tends to secure a regular action of the bowels better than attentfon to the quantity and quality of the food, and it too frequently happens that from inattention to this serious diseases occur.

PROPER FEEDING.

Horses are most healthy when their food is properly regulated in quantity and given in sufficient variety. If the stomach and bowels are at one time overloaded and at another suffered to remain empty, it is obvious that irregular action is likely to be induced, while it is equally evident that feeding for long periods on dry and highly astringent material, especially when the natural food of the animal is of an exactly opposite character, is likely to cause derangement. If during the winter more roots, especially carrots, were employed, there would be less need for physics in the spring, and if green forage was used in moderation there would be little need for physics at all. All roots or all grass is not compatible with working condition, and it is idle to expect efficient labor on either, but there are few cases where carrots or swedes cannot be obtained in moderation and due advantage taken of their succulent, laxative, and alterative properties, just as there are few instances where small quantities of green foods, as they come along in succession, are not obtainable for use as spring medicine. Where physic is really necessary, or thought to be desirable, there is certainly no need for the large and repeated doses of aloes that used to be given. We very well remember the time when a "course of physic" consisted of three doses at intervals of a week of progressive quantities of aloes, ranging from seven to ten drachms. Captain Mackenzie mentions two cases in which physic may be desirable, the first being when a horse meets with some injury. After an accident, and in cases of acute lameness, a dose of physic is often most helpful, and we hape known it to have a magical effect in a case of lameness, and particulacly of foot lameness. The other is when there is to be a drastic change in the diet, and there is certainly an advantage in a dose of physic to get the grass out of an animal before putting it on a dry diet, and especially if a full allowance of grain is to be given at once, but even these caset of bringing horses off grass can be met by gradually introducing the grain and giving bran mashes during the transition period. In the cases of horses especially, aloes should never be repeated until from flapse of time it is certain that the first dose is to remain inoperative. We have known a case where a horse not previously "prepared" for physic, and allowed to stand in the stable, held a physic ball for a week, and at the end of that time, when it was contemplated repeating the dose, commenced to purge violently. Experience, too, goes to show that two comparatively small doses of aloes given at short intervals are much more likely to cause super purgation in the horse than the same quantity given

(Continued on page 637.)

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Insures better work from the new machine and lengthens the life of the old. Wherever bearings are loose or boxes worn it takes up the play and acts like a cushion. Changes of weather do not affect it.

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If you have Live Stock for sale advertise in the Maritime Farmer.

POULTRY.

Poultry Secrets.

Numerous are the advertisements offering to exchange some valuable poultry secret for a certain amount of the coin of the realm. Judging from the number of the advertisements and the space they occupy, there must be a good many buyers. The business evidently pays.

In what I am about to say I shall refer to no particular secret, at least so as to identify, nor shall I attempt to say that the so-called secrets are not worth all or more than they cost, but this I will, and do say, that so far as I have investigated I have found them not to be secrets at all, but well known principles in use by some of the best breeders in the land. I have in mind at this moment a sttikingly advertised secret—so strikingly advertised that I would not be surprised to learn of an immense sale of it, but which,—or the principles upon which it is founded, —was communicated to me twenty years or more ago by a breeder who had it from one much older in the industry than he. And let me say right here that I consider it a good thing, worth, to one who does not know it, all and more than it costs.

What I object to in many of these so-called secrets is this, that the seller of them is not the discoverer; that he is attempting to make money out of what cost him nothing in time, effort or expense; that he is making merchandise if what, by good right, should belong to all. When a man by his own efforts, through the expenditure of time, labor, brains and money, has discovered something of benefit to poultrymen, he is entitled to sell his discovery and reimburse himself for its cost. He has as much right to do this as any inventor who applies to the patent office to get protection for his invention. The two things are exactly parallel. And if profit will encourage the inventor to go on with his inventing, profit ought to be an inducement, a legitimate inducement to the poultry breeder to pursue his investigations and discover new and better ways and means for caring for poultry. But just as an inventor is not entitled to a patent for ideas which have been embodied in devices in public use before his alleged invention, so poultry secrets, so-called, which have been known to many for years, are not legitimate objects for sale. This modification, however, ought to be made to the last sentence. If the socalled secrets are sold for a sum sufficient to reimburse the seller for printing and distributing them, the fact of their sale at such a price is not objectionable; the only objection is in clothing them with an air of mystery by falsely calling them secrets, when they are not secrets but simply valuable information. The issuing of poultry information at a reasonable price is legitimate publishing business, as legitimate as the publication of medical, theological, legal or other books of specific information. We ought not to lose sight of this side of the question.

But one is excusable for hating and detesting announcements which are both true and still wholly misleading. If I should advertise that I could furnish an insect powder at five cents a pound, and I furnish ordinary road dust, dry and fine, with a few drops of carbolic acid added to give it an odor, the buyer would have a right to complain, And yet fine road dust is a good insect powder, choking up the spinacles of hen lice and thus killing them, when properly applied.

To summarize, let us advertise and sell secrets if we have them; let us advertise and sell information, if we desire to do so; but let us call a spade a spade,' and not mislead by our advertising any of our brethren. Let our advertisements speak the truth, so far as we know the truth, so that we shall not intentionally disappoint any who have trusted us. —H. S. Babcock.

Like Begets Like.

'Like begets like' is a law of nature that is applicable to the breeding of poultry as well as anything else. If you breed from fowls that are strong and vigorous you will get chicks that will have vigor and vitcent. of loss. If you breed stock that ality to carry them to maturity with very little trouble and a small per shows any defects or that lack vitality and vigor, you must at least expect part of your chicks to have the same defects. Remember, 'like begets like.' So start the poultry business with only the best. Better start with a trio of hardy, vigorous fowls that are up to the standard than to have 50 fowls that are not bred or that lack vigor and vitality. The success of the poultry business depends on pleasing your customers. This you cannot do unless you can furnish stock and eggs of high quality. The demand for high-class line and pedigree-bred poultry of all the leading varieties is now and has always been far beyond the supply, thus proving the necessity of breeding the best. It is not necessary to pay unreasonable prices for your stock and eggs, as there are plenty of reliable breeders that ask only an honest price. It is not advisible to buy stock or eggs from too many breeders, as one may breed for feathers and show room alone while another may be breeding for something else. Utility must not be overlooked, for some breeders do overlook this in producing show birds. Many ask what breed is best to begin with. My advice is to get breed you can handle best as a side line, with your surroundings. Get the experience, and then you may follow it alone as a business. I have found the Light Brahmas and Rose Comb Rhode Island Reds more profitable than any other breeds. The Light Brahma is without exception a favorite with poultrymen, even with those who do not breed them. They are often referred to as 'the aristocrats of the poultry yard.' In size they are the largest of domestic fowls, and with their proud, stately carriage, they are very attractive. They are great favorites as 'soft roasters' and the mature fowls are very large, weighing from 8 to 14 pounds. They are excellent layers and stand confinement better than any other breed. In the show room they attract the attention of all who see them.

The Rhode Island Reds are a general purpose breed that are gaining favor very fast, both on the farms and in the show room. They are excellent layers, large in size, best of broilers at an early age and pullets mature and begin laying very early. They are very hardy, being able to stand the heat and extreme cold of any climate. I am breeding some pens of both breeds. I have birds in my pens that score from 90 to 95 points. I think line breeding the best, as you can keep your stock bred up, to the Standard of the show room, and at the same time keep the good shape, color and laying qualities in your flocks; but I do not advise breeding too closely. Better buy cocks for the first three or four years; then use trap nests for your line breeding.—M. R. Yelton.

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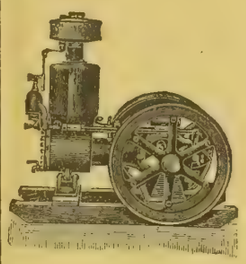

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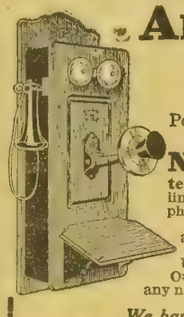

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THE FARM HOME

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Jacassa's Journal.

(Continued from last Issue.)

Later—Afternoon.

Mr. Meredith came in this morning, tired and heated from his labors in the barn. I d d not know he was lying on the lounge, in the cool sitting-room, as I went down for a book I had left there, for the shutters were partially drawn. But he spoke, rising.

"What volume have you there, Miss 'Cassy?" He has called me that of late.

"Mrs. Browning's Poems."

He came forward. "Won't you sit down here by the window—I will open the shutter—and read me something, while I play 'shiftless,' as Aunt Ophelia hath it, in this comfortable rocker? or are you busy—engaged in writing? I saw you up at your window, as I came in. You must be an indefatigable correspondent."

"O no, not particularly so!" I answered, smiling, for I have been writing a long periodical article. "What particular poem shall I read you, Mr. Meredith? Have you any preference for Mrs. Browning's?"

"None. I do not know much of these latterday poets, though I may shock your taste by confessing it," he answered. "I had a Byronic age once, but latterly I have eschewed everything of his but 'Childe Harold' I read that sometimes, when I am misanthropic. Bryant I place at the head of American poets; Longfellow, Field, Lowell, I read sometimes, in hours of leisure; but these lady poets, I must confess an ignorance of them, even if it involves an acknowledgment of being behind the age. You read a great deal, Miss 'Cassy?'

"Considerable! But, indeed, you should have read Mrs. Browning, Mr. Meredith! You have lost much," I said.

"Possibly. But I am one of those who believe, with a sort of conservatism, that the whole of written poetry may be found on the pages of Homer, Milton, Shakespeare, and the Book of Isaiah. Others may write much and well, but they will only give variations on the original theme." He said this in a sort of quiet assured way; but it set me to thinking.

"Then you deny the inspiration of our modern poets?" I said at length "Because a Jenny Lind has sung, you deny the gifts of voice in a Tontag; or, to go back to a more dissant age, because Socrates was a philosopher, you deny a Sir Isaac Newton! What a poverty-striken world you would make of it, Mr. Meredith! but you shall no(condemn unheard. But tell me, after hearing if language ever held truer spirit of poerry than this!" And I read that heart-touching wail over England's human slaves—"The Cry of the Children."

He listened in a kind of rapt surprise. I could see the red, indignant blood come and go on his cheeks. "Shameful!" he said, when I had ceased, "shameful, that such things be in any land, much less in the enlightened country of our ancestors! I am glad I did not visit these factories when in England, where they grind out the souls of the poor, and where the children 'die before their time!' We all know that these things exist; but it stirs up the blohd to hear it set forth like that. A perfect word-picture, and a stirring one at that!"

"Then you acknowledge that a little of the soirit of poetry might have been rescued from Homer, Milton, and so forth, to be bestowed on Mrs. Browning?" I queried, mischievously.

"Oh, pshaw!" And he laughed and colored a little. "You women have a way of taking one up so! But that's a regular society poem—it shows up social evils. If a woman wrote it, she's got a masculine mind. I'll bet considerable, your Mrs. Browning is strong-minded, and that volume does not contain one real, tender, domestic heart-poem!"

I smiled, and turned to that exquisite lyric which always moves me stranglely—"Bertha in the Lane." I read it to its close.

"I submit; and, like Oliver Twist, I shall ask for 'more,'" he said, when I had finished. "Read me this." Turning over the leaves of the book, he had taken "Loved Once!"

My voice had trembled as I closed, and I hoped he would not ask me to read more; but I read the poem selected; then rose.

"Stay, please!" he said. "Don't hurry off above stairs! I want to talk a little. That 'Bertha in the Lane' was a sweet poem, a beautiful revelation of an unselfish soul. Do you believe there are such in the world now? Souls, I mean, who would be thus willing to resign their only beloved to another, like Berthe? Under the same circumstances, I mean?"

"I believe he or she who would struggle to win a love that belongs to another, or to retain a waning would steal his neighbors' goods or bind a captive against his will! And, love, is as guilty of sin as he who if they do, they must scorn themselves, and feel humiliated ever after!" I said this proudly, for his eyes were on my face.

"And so you fully credit, and, if called upon, I would, endure this 'love's divine self-abnegation' whereof Mrs- Browning wrires? And what is that you just read?

'Those never loved
Who dream that they loved once!'

Did you ever love, Cassy?" And again I felt his eyes upon my face.

"Never!"

I think my tone has something so assured, so cnncentrated, and withal so entire in it, that it disappointed him. He looked keenly at me. I was thinking how self-deceived I had been six years earlier in my life; and he was thinking of—I don't know what.

"And yet you have suffered."

"How do you know that? At least, what cause have you for thinking that?" I answered, half in surprise, yet retaining my self-possession.

"Oh, we legal gentlemen are schooled in heart-craft," he answered smilingly. "We have a faculty of reading hearts in faces."

"Then mine must sadly belie me," I answered; "or your legal eyes are for once glamoured! And, if I have suffered, be sure no heart malady laid the foundation of the disease."

"And you deny that you ever loved?" he asked, still regarding me fixedly.

"Most assuredly!" was my reply.

Stooping, just then, to restore me the volume, which had slid to the carpet, a miniature fell from his vest pocket. He recdvered it and passed it to me with the remark, "It is Kate Harlow. She gave it to me the day she left for Nahant, bidding me not forget her. Do you think her handsome?"

"Such a face would be called so—I believe the original is, Mr. Meredith. You could scarcely need the 'counterfeit presentment' to conjure a remembrance of her charms."

The words were assured and cool, as I handed the picture back. I think my manner was so, for the gaze which met his was firm and level. I felt that I could defy him then to read my heart on my face. I rose to leave the parlor. As he was restoring the miniature to his pucket, I saw him covertly bite his lip.

"Must you go? Promise me, first to ride down to the beach with me, after tea. The evening will be a magnificent one, for the moon is at her full."

"Thank you, but I hardly see how I can tonight. I told your Aunt Sarah I would walk over to the village with her," I replied.

"Oh, Aunt Sarah will let you off, I am sure. I will take her over myself in the phaeton. It is three miles to the village."

"But I had rather you would not ask her. Three miles will not weary me or her either. Your aunt is a great walker," I persisted.

"As you will," he replied, with a little pique in his manner. "I will not insist upon it, since you seem disposed to deny me. But I shall go back to the city soon, and I had hoped we would not grow to be enemies at parting. You remember our compact, the first day we met? and we have been friends so long."

It was foolish, this feeling which prompted my denial. Would he not be likely to suspect my true feelings? I was foolish, indeed; I might let him, at least, bear away kindly memories of me. But, after what I had said, I could not yield with a good grace.

"If I had not promised your aunt, I said, as a sort of compromise.

"Will you ride with me tomorrow night, Miss 'Cassy?"

"Thank you, I will, Mr. Meredith." I said it cheerfully.

"Thanks! We will look upon the sea once again in company. I think I shall leave Ryefield day after to-morrow, though I have not mentioned it before. Mr. Harlow writes every day for my return.

"Ane Kate, too, I suppose," I said, mentally in bitterness, As I gained my chamber." And then he will go back and forget me and all these beautiful weeks we have passed together. I shall meet them some time in the street, she leaning on his arm—he, her lover or husband."

I wish this last ride were over! I wish it were all over and he were gone!

August 22d.

How can I write of this new, strange joy flooding all my heart? How can I think calmly in this new sweet life upon which I have entered? I suppose I shall grow quieter by and by; I shall get used to happiness. It is so long since I had any one to care for me—so long since any one entered within the hedge-rows of my heart to plant sweet love-roses! and now that it should be he, of all the world! I would not have believed it yesterday, if one had come to me and told me I should pass from the bleak land of still life to this living, breathing reality. Yesterday, an isolation from the great heart of love; today, bound with strong cords I would not break. And to think he has chosen me—he, so good, so strong, so noble!

But I will write it all out calmly here. Mayhap, I shall thus still this wild surging sea of happiness which breaks over the hitherto sandy wastes of my being. It seems like the tales I have woven from my own brain—like telling what has befallen a third party—as I write it here.

Last night, when the sun was dropping, like a great globe of fire, into his crimson-draped bed among the western hills, Mr. Meredith brought round his horse, and we rode slowly down to the seashore. It is but four miles distant—the salt sea air floats up here often at twilight—and we drove leisurely. The sun was down when we reached the sands, but the deep summer twilight lingered over the land and waters. I had not talked much as we rode along; indeed, Mr. Meredith did not seem to expect it, for he filled all the time in his own way, speaking of many things—of foreign lands where he has travelled for he was abroad a year with Mr. Harlow's family, he tells me—and it was very grateful to me that he did not seem to require any effort on my part, only to sit beside him and listen. So he talked till we came quite down to the shore; then there was a silence and, letting the reins fall loosely, we rode very slowly along the sands. And, for myself, to sit there in the silence—to withdraw my thoughts from the contrast of my own bare, toiling life with the one enriched by travel he had just described—to banish the idea which had arisen before me, "If my father had lived, I, too, should have visited the Old World"—to still my heart, and sit there in the dusky twilight, heeding, hearing nothing save the voice of the etneral waters—this was for what I strugled. And the waters stilled me—the murmuring voice of the sea soothed me; soft splash of the waves on the beach seemed to wash away all thoughts of unrest from my heart, bringing me quietude, peace.

"You love the sea?" said Mr. Meredith. It seems to have a particular hold on your affections."

I had not been conscious that he was regarding me; but the twilight was not dark enough to hide the in-

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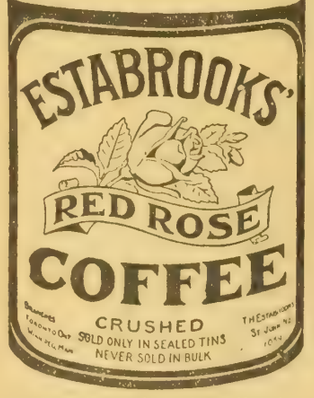

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ful memories. Will you tell me something of yourself—your past? Be assured I do not ask from idle curiosity, but as a sincere friend."

In another mood, I might have rendered an evasive answer, or waived the subject with a light jesting remark; but his manner and words were so respectful, and, withal, so sincere, that I felt I could trust him. Keep careful watch and ward over our feelings as we may, there are seasons when the ebb-tides will flow, when the heart longs for human sympathy, and we must speak outright; so, sitting there in the twilight, I told him all. I kept back nothing, not even my passage d'amour with Montague Livingstone Wentworth, his desertion in the dark days of adversity, my loneliness in the days following my bereavement, and, lastly, my brain-and-pen labors these last solitary six years of my life. He only laughed a low, quiet laugh when I recounted the story of my grande passion, as I called it; but he heard me through silently, when I was telling of my life there in the city, then, when I had finished, said—and I knew, by his tone, that there was a sparkle of mischief in his eyes: "And to think my good Aunt Sarah has been harboring a blue, a 'strongminded' woman, all these months!" And he went off into an immoderate burst of laughter.

"The discovery seems to amuse you vastly Mr. Meredith," I said half tartly.

"It does; and not only ought it to amuse, but amaze me, Miss Bowen that I have actually lived a whole month in the same house with the lady in question, on terms of peace and quietness!" Then, relapsing into a graver mood, he continued, in a friendly tone: "But you lead an isolated life in the midst of your labors. It cannot wholly suit you, this life, Miss 'Cassy, for you were made for better things than this ceaselessly toil at the treadmill of brain labor. You possess all the gentler feminine domestic qualities, and, by and by, I suppose, will make some man happy in the different sphere of home?" He said this inquiringly.

"However fashionable it may be for young ladies to wish to declare themselves 'engaged,' " I replied, "I must prove the exception. I shall probably never marry !"

I took a sort of pleasure in saying this—letting him see how little I cared for the attentions which city belles, like Kate Harlow, covet.

"How would you like to travel—to visit the Old World—Italy?" he asked, changing the subject suddenly. "You should travel in order to write. Look here, my little friend, I have a confession!" And he laughed. "Do you suppose I didn't know you when we met? That I haven't known your propria personea all these weeks I have been here at Ryefield? The graver erudition of Coke and Blackstone, it is true, leaves me but little leisure for the light literature of the day; but I have often seen and read your articles in the ladies' magazines—Kate Harlow takes them all—and I have heard her lavish warmest eulogies on them. So my confession is this: I recognized your name when Aunt Sarah presented you, and I was confident of you during that first conversation. Haven't I kept the secret well? Give me credit for undue discreetness, Miss 'Cassy! But I was speaking of travel for material, since you vow yourself wedded to this literary life!" I was confident he smiled as he uttered these last words.

"There is an old saying, 'See Naples and die!' " I replied; "but I should be well to see Italy and live, even if I never put pen to paper again. But it is a fairy-land I never expect to reach !" And I sighed.

(Continued in Next Issue.)

tense gaze I raised my eyes to encounter.

"It is my father's grave! Do you wonder, now, that the sea is dear to me, Mr. Meredith?"

This was the first time I had ever spoken to him of anything connected with my past life; but the time, the place, the influences were peculiarly softening. I burst into tears. He suffered me to weep myself calm, then said, kindly: "Forgive me, Miss 'Cassy; I did not intend to call up pain-

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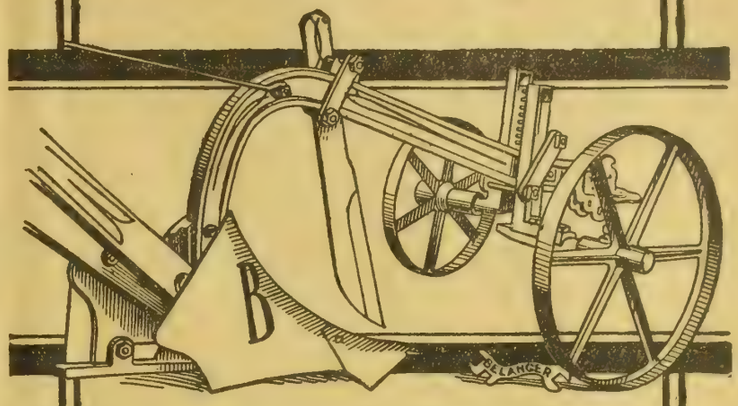

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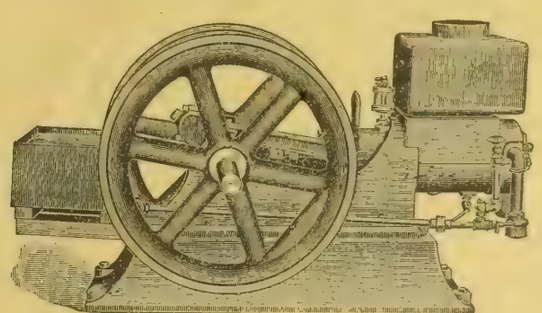

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Requisites for Matrimony.

Mr. Editor.—It has been my conclusion, lrom a somewhat random observation of my married friends, that the paramount consideration should be congeniality of temperament that two people who have not congenial tastes should beware of experimenting with matrimony. The in. ability to enter into each other's interests gradually and surely raises a wall between man and wife. It often strains love almost to the breaking point. I, therefore, place love and congenial tastes above any consideration of money. Ib

Albeit, I am far from depreciating money and its purchasing power, being myself a lover of luxury and beauty of sursoundings. I think, however, my view is broad enough to see the true ratio of a man and his worldly possessions.

I opine that the vital considerations of a man and woman before marrying are not the man's income or the woman's training or lack of training to become a wife, but rather an absorbing love, mutual interests, a happy outlook on life and an inherent desire for an ideal home.—A Spinster of Thirty.

Home Nursing.

Every woman who is the mistress of a house especially the mother of children, should know something about the art of nursing. There is something in the tender, tactful touch of woman that fits her fot this particular work. Ever since the pioneer work of Florence Nightingale in the Crimean War, woman has been inspired to care for the sick and dying, to minister to the wants of suffering humanity, until today 90 per cent. of the nursing staff off the world are females. Her sympathetic nature, soothing voice and unscrupulous cleanliness make her mans superior in the capacity of nurse.

In country districts and outlying places, it is not always convenient to call a Dr., and many an illness may be avoided by the wise administration of a sensible woman. When ordinary ailments are taken in time there is little need of a Doctor. Too often we fill ourselves up with dangerous drugs that are more dangerous to the system than the disease, especially are drugs most dangerous in growing children, where nature is constantly devcloping, unfolding and expanding. Mothers who make the welfare of her child the prime object of life, will find that cleanliness, fresh air, sunshine and, nourishing food are the only necessaries to promote healthy and happiness. Let the sickly live more out of doors. Their contact with nature makes the blood mount the temples, respiration is regular, and temperature normal. The object of hygiene is the preservation of health, and no where is it more neglected than in our common schoo,s. Ill ventilated school-rooms, improper seats, and long hours are, in my opinion (and I have been both teacher, nurse and mother) responsible for many ills of childhood. Think then how cruel it is, when they are already pale and delicate, to fill their systems with the very thing they do not need—drugs.

If I had a delicate child, I should give it a morning bath, nourishing breakfast, comfortable clothes, and turn it out to dig in the mud.

Our lives are lengthened or shortened, by the observances or neglect of the rules of common sense and these do not require any great personal sacrifice Hyhiene simply means sanitary discipline and is derived from Hygeia, the Greek goddess of health.

The Greeks were an excellent type of manhood, and we read that their mothers used to take them down to the river in the morning, and dip them in. Then taking them by the hand, would run with them for three miles in the wind, that they might dry off. What would the people of conventional Canada say to this.

I believe in the old adage, that an ounce of prevention is worth a pound of cure and if we aim to lessen disease in children, pay more attention to health habits, we would have a race that had little need fo? nurses and doctors. There is nothing more beautiful than the glorious sunlight, and it is especially necessary for the healthy growth of children. Let its warming forces come freely into our dwellings, animate our spirits, prevade our homes and hearts with its joy, inspiring and health preserving influences.

NURSE.

A Good Thing.

Wr. Editor.—A certain bachelor friend of mine is continually rehearsing the virtues of a good wife. She must be a good cook, an economiral housekeeper, more or less of a home lover and home stayer. Some time ago he lost his heart to a nice little girl, and he made the remark that she would make a good wife for somebody because she had such a "sweet little face." maybe he is a great exception, but I don't think so. When a mans falls in love with a girl, he doesn't stop to think what she can do or what she can't —which is a good thing for lots of girls.—Ethel M. Johnston.

Love and a Cook Book.

Mr. Editor—Girls are accused of not knowing how to economize. Make inquiries into the case of any successful business man who started on a moderate income, and find out who did the economizing when such economy was nesessary. In nine cases out of ten, it was that "foolish," "frivolous" wife who doesn't "realize how hard it is for any young man to make a dollar."

The average girl cares infinitely more for love, a spirit of comradeship and partnership, than for the $15,000 income. Our bachelor friends fear they will not be properly fed—deluded creatures ! They have absolutely no means of knowing the domestic qualities of the girls they meet.

When a man calls on a girl, would he like to have her meet him at the door and ask if he would like to have his steak rare or well done; excuse herself, to appear a few moments later with her nose red and shiny and produce a well-cooked steak and perhaps a biscuit ? Or would he prefer to have her looking

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dainty and sweet, offer him a dish of delicious fudge? He has always given her the impression that he prefered the fudge, together with a good supply of small talk. But did it ever occur to him that the same hands were capable of cooking a substantial meal?

If a man really cares for the more practical and serious things of life, and thinks so highly of a girl's domestic ability and training, why doesn't he impart to her his interest in such matters? She is a most responsive creature and ever ready to pleate him. He indariably shows his preference for the "gay butterfliesf"

The subjects of domestic science and domestic art may not enter into her conversion, but the average girl understands household duties and responsibilities and would readily adapt herself to new surroundings and delight in making happy the man she loved.

Give the clever Canadian girl love and a good cook book and man need not fear starvation.—Mabel R.

The Sporting Spirit.

Do you think I would dare say that the girls in my "set" are not rightly brought up and trained? They would find it out somehow or other—they always do—and I should get an awful talking to.

As a matter of fact, I think they would get along pretty nicely in the harness. The amount of self-denial they would show in married life would depend a good deal on the husband. If they thought he was a pretty good sort of a chap they would be willing enough to sacrifice for their common good or the good of their children. Of course there are some who, if they had to cut down their personal expenses, would do so with a grieved air and think, if they did not say it, that they might have done better in the matrimonial market. But most of them are good sports, not given to self pity nor artificial ideals, and I think that with the right man they would be more than willing to do their share.

But I don't think they would think much of the self-denial part of it. They would simply look upon their married life as a new experience, a new situation in which, more than ever before, they had to discriminate between the really worth while and the unnecessary, and try, with what wisdom and money they had, to make life for herself and husband not only comfortable, but real and live and interesting.

As for "bringing up" and "training," I don't think these count as much as the girl herself, her ideals of life and her adaptability. It is all very well if she has learned the domestic arts; but if in so doing she has narrowed herself to the boundaries of the walls of a house, she has not her full power of enjoying life, married or single.

"Sporting spirit" is an usual term to apply to a woman, but it describes that spirit of taking adversity with a smile and going ahead that I find in many women' Many a girl that is "rightly brought up and trained" for matrimony in the eyes of the world lacks just that. She is more likely to bow to the gods of things as they seem to be. She is less likely to enjoy with her husband their hours of leisure. There are some girls in my set who would understand that a man would prefer to come home for a supper of bread and milk and a smiling wife than to a five-coflurse dinner and a worn-out housekeeper. Perhaps I am an exception, but I should prefer a wife who could share a little music or a good talk around the open fire to one who is conscious of her "responsibilities" that she sees none of the possibilities. For there are possibilities —possibilities in the home in the way of hospitality ehat is unprententious, possibilities outdoors in the way of unstilted recreation.

In short, I do not think that domestic training is necessary, and I think that if such training narrows her vision and her adaptability, she is better off without it. There are some girls in my "set" who can keep their feet on the ground and their heads in the air.

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Down With the House Fly.

A bulletin issued by the Dominion department of agriculture contains an absteact of a lecture deliverev by C. Gordon Hew'tt D. Sc., Dominion entomologist, on the subject of "House Flies and the Public Health.' Its circulation is timely, for the fly season is near at hand. Pretty soon there wil, be a succession of hot days, and then the flies will be swarming.

Mr. Hewitt gives the house fly a very bad name. "It is,.' he says, "the embodiment of filth, swathed with the ger s of decay." He asserts that it carries on its body and legs bacteria of all kinds, and that no living fly is free from germs. Naturally, therefore, it is the common cartier and disseminator of all sorts of infectious diseases, but notably of tuberculosis, typhoid fever and infantile diarrhoea. Impure m lk is blamed for the slaughter of many innocents every summer, but the fact is that in many, if not most cases, the milk is made dangerous by flies reeking with infection. Typhoid and similar diseases of the intestinal tract are caused chiefly by flies. "In the South African and Spanish-American wars flies were responsible for more deaths than bullets," is Mr Hewitt's startling assertion.

The only effertive way to cope wit' the plauge of flies is to carry the war to the sources of the evil—the breeding places of the little pests. They breed in filth, preferably in decaying animal and vegetable matter, suth as accumulate in heaps of household refuse, and also in stables. Mr. Hewitt suggests two remedies. Local health authorities thould make it illegal to keep stable refuse exposed for more then six days—the time necessary for the development of the fly from the egg; garbage should be quickly and regularly removed and destroyed, and it should be compulsory to keep the garbage receptacle closed. It is suggested also that chloride of lime or kerosene be sprinkled over garbage after each addition; this treatment prevents flies from breeding.

If these suggestions were generally acted upon, there would noy only be much annoyance and inconvenience averted during the summer months, but the health of the community would be greatly improved and the rate of summer mortality would be cut down.

Here is a moth preventive recommended by a tailor and furrier. After thoroughly airing and brushing, put garments away in the usual chests, drawers or closets used for storing, but instead of using those evil-smelling tar and camphor combinations place in a corner of each chest or drawer a two-ounce phial of chloroform, uncorked. This not only keeps moths out, but kills any larvae which by chance might have eluded the vigilant eye of the housewife.—G. M. B.

Burned Suger—"Professor Trilbert of the Pasteur Institute at Paris has demonstraled that burning sugar develops one of the most powerful antiseptic gases known. The practice of burning sugar in the sick room was formerly regarded as an innoceent superstit on." If sugar were burned in the house when one member of the family has the grip or merely a cold, there would be less danger of its spreading throughout the household. This may be easily done by putting a few hot coals on a shovel or pan, sprinkling them with a tablespoon of sugar and letting it burn in the rooms where the sick person has been

Your old Carpets will make you handsome Rugs. Write for booklet mailed free.—THE MARITIME RUG WORKS, St. John, N. B.

Consumption Book FREE

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

Write at once to the Yonkerman Consumption Remedy Co., 1592 Rose Street, Kalamazoo, Mich., and they will send you from their Canadian Depot the book and a generous supply of the New Treatment, absolutely free, for they want every sufferer to have this wonderful cure before it is too late. Don't wait — write today. It may mean the saving of your life.

Childish Fears.

There are few things more degrading to the moral nature than fear, the expectation of pain. Healthy being is impossible under its influence, and one of our earliest cares must be to prevent its even entering the atmosphere of a child's life. Timidity and courage are alike easily developed, and it is the business of the parents to foster the latter, while avoiding in every way to call the former into growth. It is, perhaps, not too much to say that upon the impressions and influences of the first seven years of our life depends our possession of the virtue of courage or our servitude to the demon of fear.

Man, both in his early and later years, has a dread of the unknown; to an infant everything is unknown; and it behoves its parents to watch that no new experience should come to it with fear. A sudden sense of helplessness in solitude may be dangerously terrifying to a baby. The dark is terrible, unless always associated with a sense of security and the mother's encircling arms. Children should never be put to sleep in a room without some shaded light, and the nurse within hearing of the slightest noise. If on waking they are not thus quickly reassured by light and attention, thay may suffer agonies of fear long before they can explain what they are feeling.

No children, however young, should ever hear disagreeable or frightening things said in their prenence. Ghost and goblin stories, murders and terrible descriptions of every kind, such as those in "Blue Beard" and "The Forty Thieves," ugly, uncanny mysterious, or painful pictures— everything capable o. exciting fear—must be avoided by the entire household. An imaginative child will contrive to build on the smallest mysterious suggestion, an image of dread which may haunt him for years. I have known a very young child lie awake night after night in agony after hearing two nursemaids speak of murder. The same child had a terror she never forgot from a ghost story told her by an indiscreet governess. Cases of other children are known to me who, after having been kept from all fear in their own home, heard ghost stories told, for the first time, while visiting, and grew to dread, all through the day, the approach of bedtime, and the dark, lonely bedroom in which they lay awake. Many people who look back to similar experiences in their childhood hold that some such hardening process is inevitable and salutary. The battle between unreasoning, instinctive fear and reasonable courage must indeed come in every life; but we should try to have it come when the faculties of reason and the virtue of courage are cultivated into strength, not even when, as in early childhood, the instincts are uncontrolled by any higher faculty, and unchecked by any experience of fact.

Equally vicious, but more visible in result, is the influence of fear inspired by threatened punishments, cross words, and angry gestures. We all, unhappily, know the leaden look the timid eyes, of children subject to these evils. I have known a sensitive child to dread scolding and impatient tones, even when not addressed to herself, with a shrinking which almost made her a coward for life. But the question of the punishment of children has not its place here; for the moment, we have not to deal with faults already engendered, and in need of correction, but with the training of the first blameless years of infancy; and in this training the perpetual sunshine of the moral atmosphere, the light and warmth of tenderness and love, is of all things first needful.

I have said that a child should be kept in ignorance of fear until it is old enough to be brave; but the experience and the lesson in courage may come unawares with some of the first impressions of the external world. I saw the other day a baby ten months old touch with her tiny fingers some fur on a dress. It was a new sensation to her, and she shrank from it with a comical horror, rubbing her little hand on her dress as if to get rid of some visible impurity. But the habit of examining new things was strong in her, and she presently touched the fur again and again, at first with a recurrence of her horror, then with dimishing dislike. The unknown became familiar to her, and gradually she came to touch the passive "pussy" with almost liking. The same child learned to stroke a gentle spaniel with complacence and love.

A white feather boa can be easily washed at home, exactly as one a warm lather, using two waters; rinse in clear warm water, and give would wash a delicate woollen scarf or shawl. Shake it lightly about in it a **final dip in slightly** blued ter. Tie or fasten the two ends together, so that it can hang over the line without breaking any of the feathers. A breezy day should be chosen and the boa shaken occasionally as it is drying. If the boa is an expensive one, it might be advisable to have it dry-cleaned the first time, but home-washing does admirably for second-best, and few feathers are lost if care is taken. For that matter, a boa returns from the cleaners much thinner than it went.

An enamelled pan is the most reliable of all to make "catch"—probably because it is so thin. A thick iron pan is the safest to use, and it should always be rinsed out with cold water immediately before the over with butter while wet, the milk will be yet more safe. As we have all experienced, a too fierce or flaming fire will cause milk to burn very milk is put in. If the pan be rubbed readily.

THRESHERS

Are you going to buy this season ? If so you want

The Sussex Little Giant.

Our New "Four Horse" Thresher.

Four Horse Size—Experience has shown us that Gasoline Engines are coming more and more into use for threshing purposes. With this power the demand is for a machine small enough to be moved from place to place with ease and yet of sufficient capacity to turn out a big day's work. Our Four Horse Machine has been specially built to meet this demand—A five to seven horse power engine will operate this machine with ease. It will turn out more work and work better than any machine on the market. Dimensions of Cylinder, 17x30; dimensions of sieve, 30½x36; speed, 900-1000; capacity, 500 to 1000 bushels per day; weight not mounted, 1900 lbs.; weight mounted, 2400 lbs.

Two Horse Size - For use with Two Horse Tread Power or small Gasoline Engine. Dimensions of Cylinder, 17x26; dimensions of sieve, 24x36; speed, 900-1000; capacity, 300 to 500 bushels per day; weight not mounted, 1400; weight mounted, 1900.

One Horse Size..For use with One or Two Horse Tread Power. A very handy and serviceable machine. Possesses all the conveniences of the larger machine. Dimensions of Cylinder 17x20½; speed, 900-1000; capacity, 100 to 200 bushels per day; weight 1000.

Apply to our Agent or write direct to the factory. We will be pleased to quote you prices and give you full informatiou.

Sussex Mfg. Co., Ltd., - Sussex N. B.

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Large, broad-faced Drive Wheels.

Four-powl Ratchets—no lost motion.

Finger Bar and Knife back are finest rolled steel.

Long wearing Plates on cutter bar.

Steel Clips hold knife in position.

Sections have hard edge and soft centre.

Raised Ledger Plates give long cutting edges—the serrated edges add greatly to the cutting efficiency.

THE MASSEY-HARRIS CO., Limited, Moncton, N. B.

Pasturing and Fencing Hogs.

In the first place, we should have rye and clover sown in the fall for the first spring forage. Select a good sized field or a field that can be plowed and worked to good advantage, and fence it off with hog wire fencing 3 feet high. Cut stakes and drive them in for posts. This fence does not cost much, and can be taken down and put up very quickly and is not expensive'

Next to your field of rye put in a ctop of rape, clover and barley; sow at the rate of 3½ pounds rape, six pounds red clover, and about one bushel barley to the acre. If you have not enough shoates, pigs or old hogs to keep this fed down (not let it get too rank), you can fence it off and hay it. One acre of this will keep eight or ten old hogs all summer without grain, and by keeping rye fed and cut down you can keep a number more. Plant sweet corn in a field near by, and don't forget to put in some pumpkin seeds with the corn, or plant seeds in hills by themselves.

Plow up the rye field in August and sow again to rye and clover. Fence it off, and the last of September or first of October it will make good feed, along with pumpkins, poor apples and what remains of your field of rape and clover and barley. If you are going to fatten your hogs you will see that your grain bill will not be large. To finish them off give plenty of water and a shelter. I use movable hog houses summer and winter. Hogs kept in this way through the summer get the land in nice condition for crops. The land that is used for rape, clover and barley must be well manured, or a good amount of commercial fertilizer applied. Rye does not requ;re as much. If you have any corn feed it to your old breeding stock through the winter. Buying so much western grain takes off the profits.—Frank Nye,

The Cost of Keeping a Cow.

Of course there is no general standard, even among well qualified dairymen there is a great difference in the cost of keeping as well as in the quality of the cows. Prof. Wing of Cornell College of Agriculture, in his address last winter before the New York Dairymen's Association, piled up a pretty heavy bill against bossy. Here are some of his figures:

COST OF FEED FOR ONE YEAR.

20 lbs hay, 180 days, 3600 lbs at $10.	$18.00
3 lbs. grain, 180 days, 1440 lbs. at $30.	21.60
26 week's pastkre at 38c.	7.80
	$47.80
One man to 20 cow's at $20: a month	24.00
Interest on $50, at 5 per cent.	2.50
Depreciation $50.—$25—$25. in five years	.00
Total	978.90

Prof. Wing credits the average New York cow with 4,500 lbs of milk or about 2,200 quarts at 3 cents a quart; we have $66. as her earnings or about $12. less than her keeping costs.

There is one thing to be said about these figures: No self respecting dairy farmer would consent to be represented by a cow that did not yield more than 4,500 pounds of milk, unless she gave six per cent. milk. It has long been a wonder where the average farmer came out of the hole.

Every man who "foresaw the evil" has hid himself behind a herd of cows giving six to seven per cent. milk and then his margin was small enough. It cannot be that we begin to know the dire pinch of poverty which the average cow imposes on the poor victim of her incompetency.—Hoard's Dairyman.

Physicing Horses.

(Continued from page 630.)

at once, and as super-purgation has caused many deaths among horses, and is always dangerous and difficult to stop, this fact should never be lost sight of. Even in cases of urgent need, and where constipation is most obstinate, no horse should receive a second dose of physic under 36 hours from the exhibition of the first. With cattle this is not a matter of so much importance, and one dose of purgative may follow on another in twelve hours or less, because the risk from super-purgation or causing inflammation of the bowels is quite remote.

Unless there is great urgency, it is always wise to prepare the horse for physic. This is done by knocking off all the grain, greatly reducing the hay, and giving warm bran mashes for 24 or 36 hours pzevious to administering the ball. If this is done, a smaller dose of aloes suffices, and the medicine acts with greater celerity and efficiency. After administration the mashes should be continued and the chill taken off the drinking water until the physic has "set". Twenty-four hours after the ball has been given, especially if the physic has shown no signs of acting, the horse should be led out for a few minutes, if it can be done without exposure to wet and cold, or walked round a loose box, but on no account should a horse be worked while in physic, or be set to any labor until the faeces have resumed their normal consistence. The practice of giving a dose of physic often without previous preparation, on Saturday night, and taking the animal to work early on Monday morning, is highly dangerous and to be strongly deprecated. Usually, four days is the minimum that should be allowed for recovery from physic before the horse is sent to work, and during the action of aloes, cold, cold water and corn should be avoided.

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meet every requirement of the mos elaborate social function. It's the accepted standard in silverware.

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MERIDEN BRITA CO.

Teething children have more or less diarrhoea, which can be controlled by giving Chamberlain's Colic, Cholera and Diarrhoea Remedy. All that is necessary is so give the prescribed dose after each operation of the bowels more than natural and then castor oil to cleanse the system. It is safe and sure. Sold by all dealers.

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

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That Red Rose Tea is of surpassing quality is accepted everywhere it is used as an undisputed fact, but it is in the Maritime Provinces especially that it has by unvarying goodness so well earned the term "is good tea." 61

Prices: 30c., 35c., 40c., 50c. and 60c.

Every farmer should be interested in **Acetylene Gas**—because it affords opportunities to make his home beautiful, does away with oil lamps and gives him light and fuel at half the amount he has been paying.

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Purest, Cheapest, and Best.

It leads the world

"The Monitor Generator" has no equal—as it is the only non-explosive in the world. We can prove this.

Absolutely safe. It is the Farmer's Friend. Send for Catalogue.

Manufactured by **"The Monitor Mfg. Co.," Fredericton, N. B.**

OXYGEN SPELLS LIFE

Are you ill? Have you loved ones in pain? If so **read carefully** this **announcement.** Magnificent **Oxygen Parlors** have been opened in **St. John, N. B., Suit 20, J. M. Robinson & Sons' Building,** (Tel. Main 2367), where **all curable diseases** are **cured** by **Oxygen.** No drugs, surgery, massage or electricity used. Just Oxygen and nothing but Oxygen. Fourteen years of successful record. The Oxygenators last for life. Can be used by man, woman or child. Cost only **$25 and $35.** May be **rented** if desired.

A great many people in the Maritime Provinces are the **proud owners** of these wonderful machines.

Full particulars given if you send name and address.

It will pay you to come in and see us. If not write **Lady Attendant.** Elevator takes you to the office.

Maritime Oxygenator Co.

C. Fraser McTavish, General Manager.

ST. JOHN, . . . N. B.

A PUBLIC WARNING

We wish to warn the public against being imposed on by unscrupulous dealers who substitute with cheap and worthless preparations designed to be imitations of Dr. Fowler's Extract of Wild Strawberry, the wonderful Bowel Complaint cure.

Pharmaceutical concerns are flooding the market with these cheap and worthless preparations, some of which are even labelled "Extract of Wild Strawberry," "Wild Strawberry Compound," etc.,—but they dare not use the name "Dr. Fowler," in the hope that the public may be deceived and led to purchase them, thinking they are getting the genuine "Dr. Fowler's."

Are you willing to risk your health—perhaps even your life, to these no name, no reputation, likely dangerous, so-called Strawberry Extracts?

Dr. Fowler's Extract of Wild Strawberry has a reputation extending over sixty-five years, therefore when you buy it you are not experimenting with a new and untried remedy.

It cures Diarrhœa, Dysentery, Colic, Stomach Cramps, Seasickness, Cholera Morbus, Cholera Infantum, Summer Complaint, and all Looseness of the Bowels.

Ask for "Dr. Fowler's" and insist on getting what you ask for. Price 35 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Three Bacterial Troubles of the Apiary—Know them and how to control them.

Much dissatisfaction with beekeeping as a business is caused by so-called "bad luck," which is really due to a definite bee disease which any beekeeper can learn to cure. Bees are quite as liable to disease as any other live stock, and to be able to treat such disease intelligently is quite necessary to success.

Bee moths are often blamed for the ravages due to disease; but moths never destroy a healthy normal colony, as they feed on the deserted combs after the bees are nearly all gone. Heavy Winter losses can often be attributed to disease. In fact, whenever a colony is not doing well the exact cause of its failure should be carefully sought to make sure there is no bacterial disease.

On the other hand, disease often makes its first appearance in the best colonies in the apiary, because infection is usually carried by robbing and that is generally done by strong colonies. If not checked on the start it soon spreads through the whole apiary, and from it to other apiaries in the neighboorhood.

The inspectors of apiaries can do a great deal for the health of bees but to be of real value their work must be supplemented by the earnest efforts of the individual beekeepers. Everyone should be his own inspector, carefully examining every comb of every colony in the apiary at least once a year, remembering that it is far better to detect it on the start in strong colonies than to wait until they are practically ruined and the disease has spread through the whole neighborhood. Only one cell of infectious disease makes is necessary to treat even the best colony in the apiary. And because one has kept bees for a number of years without seeing a case of disease is no reason why it should not make its appearance this year. Plenty of people have died of smallpox after having escaped it for fifty years.

When a case of infectious disease is suspected the beekeeper should go ahead and treat the disease according to directions given in this bulletin.

EXAMINING APIARY FOR DISEASE.

The disease which cause the most damage attack the developing brood, causing much of it to die in the comb, and so reducing it that the colony soon dwindles from lack of young bees to replace the old.

When examining an apiary for disease the prime consideration is to avoid robbing. The best time is during a good honey flow as early as possible in the season.

It is necessary to have a good smoker, a hive tool for taking out combs, and a supply of wooden toothpicks for testing the brood.

First go over the apiary and blow a few puffs of smoke into every entrancef This will check the bees for a time from coming from other colonies to try to rob the hive that is open. In opening the hive just enough smoke should be used to keep the bees in subjection. Remove each comb in turn from the broad chamber and examine the brood. It is best to sit on a box close to the hive with your back to the sun, and hold the comb so it will shine into the cells, and throw a strong light directly on the lower sides and bottoms of the cells. If there is no disease, the empty cells will be bright and clean, and the uncaped larvae will be plump in form and of a pearly white color. At first a number of cells or caped brood should be opened with the pick, until you are quite familiar with the outward appearance of healthy caped brood. Cappings which to any but the best trained eye appear quite healthy often cover dead larvae. When diseased cells are present they are quite frequently found around the lower edge of the comb. If any of the brood cappings appear darker than the rest or are flat, sunken, or perforated, they should be opened to see whether the brood thay cover is dead. Healthy brood is sometimes found under darkened, flat, or perforated cappings; but there is a difference in appearances which experience soon teaches one to detect. Brood sometimes develops without ever being fully capped; this is not known to be an indication of infectious disease. When each hive is finished the pick used there should be left in the hive, and if any honey is daubed on hands or tools they must be washed thoroughly before opening the next hive.

There are three brood disease prevalent in the apiaries of Canada; American Foul Brood, European Foul Brood, and Starved or Pickled Brood. The first two are known to be infectious, the last in not so considered, although its cause is not well understood.

AMERICAN FOUL BROOD.

This disease is caused by bacteria known to scientists as Bacillus Larvae (not B. Alvei, as was formerly supposed). It reaches the healthy young larvae by means of infected food unsuspectingly fed to them by the nurse bees. In most cases the larvae dies when nearly ready to seal up. and most of the cells containing infected larvae are caped. The dead larva softens, settles to the lower side of the cell in a shapeless mass, at first white or yellow, changing to coffee color and brown. At this stage it becomes glutinous, so that if it is is picked with a toothpick the contents will rope out half an inch or so when the pick is slowly

Agricultural College, Truro, Nova Scotia.

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A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time, in English, Mathematics, Book-Keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a school education and now wish to improve their knowledge in all lines.

Students completing the two year course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges.

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withdrawn. It adheres to the cell so it cannot be lifted out entire. It has the odor of a poor quality of glue. When the larva dries it forms a tightly adhesive scale, of very dark brown color, which cannot be removed without tearing the cell wall.

Where the infected larvae are caped the cappings turn a darker color and become flat or sunken, the workers perceiving that something is wrong usually start to tear off the capping but, discovering the condition of the contents, they generally leave it with a small perforation in the centre until quite dry, then the capping is removed, and in time honey may be stored in the cells containing the scales of disease. The millions of disease spores then float out into the honey, which becomes a medium for carrying the disease to other healthy larvae by robbing in the same or some other apiary. Some of the honey is also carried into the supers, to make room for alternations in the brood nest, and is marketed in the form of bottled or section honey. It goes into many homes especially in towns and cities. The wooden sides of the sections, and many of the empty bottles, or washings from them, are thrown out ly housekeepers and cleaned up by bees in the neighboorhood, and the disease carried home to their healthy brood. This is how our inspectors find more disease in the apiaries around towns and cities than elsewhere.

Now to be cured of this disease a colony must be freed from all this infected brood, comb and honey. To do this we simply take it away. But in the operation some precautions are necessary. We must see that the colony will get healthy food as soon as the unhealthy food is taken away and have means for building new comb at once. So the operation should be performed during a honey flow, and to make it perfectly sure it is a good plan to insert a division board feeder of sugar syrup. We must take precautions against starting robbing, or causing the treated colony to scatter to other hives or swarm out, be lost, and carry infection to other places. So the operation should be performed in the evening, when the bees are settling down for the night, and the entrance should be covered with queen-excldding metal to hold the queen in case of swarming out the next morning. A regular queen-excluder laid on the bottom board under the brood chamber will answer the latter purpose. Whenever bees are disturbed in their hives they fill their honey sacs with honey from the combs. As this will happen when the hive is being treated, and some of this diseased honey may be stored in the new combs, it is thought best to remove these after three days and require them to make a second start.

METHOD OF TREATMENT.

We shall use what is commonly called the "McEvoy Method." When there is a good honey flow, go to the colony in the evening, remove it from its stand, and set in its place a clean disinfected hive containing clean frames with small foundation starters, and if convenient a division board feeder with thin sugar syrup. The entrance of this hive must be covered with queen-excluding metal. Now shake the bees from the combs of the old hive into the new; but if any fresh nectar flies out in shaking it will be necessary to brush instead of shaking. Get these combs immediately under cover, and clean up very carefully any honey that may be around, so robbers from healthy colonies cannot carry home disease.

When the diseased colonies are weak in bees, the bees of two or three should be put together into one clean hive, so as to get a good-sized colony to start the cure with.

On the third evening after the first operation the starters and what combs have been built must all be removed, even greater care being taken than at first to avoid shaking out thin honey. This time the bees are given full sheets of foundation, and the cure is complete. To make sure however, the brood must be examined again in about three weeks.

The old combs and the first set of starters must be either burned or melted and boiled thoroughly before the wax is fit for use again. The honey that has been removed is entirely unfit for bee feed. Even after it has been boiled for a full half-hour it is not safe. The only way to dispose of it is to dig a deep hole and bury it.

If the disease is discovered late in the season, and the colony is still strong, leave it until November, take the diseased combs away, and supply honey from a healthy colony, in full sealed combs. Be sure that that the combs are all sealed, and that they are from a colony which has no disease.

Brood from badly diseased colonies is of no value and dangerous, and should be burned, buried or otherwise destroyed at once. Brood from colonies having only a few cells diseased might be placed over an average colony slightly diseased, and the queen caged. When most of the brood has hatched, treat as given above.

Combs free from pollen that have never been used for brood rearing that are white and clean, and have been dried from all honey before the colony was treated, are reasonably safe for use as super combs. As a rule, however, it would pay better to melt them into wax and use full sheets of foundation. All doubtful combs should be melted down.

Hives which have formerly contained diseased colonies, or in which diseased combs have been stored or carried, should be burned over inside with a gasoline or oil torch.

EUROPEAN FOUL BROOD.

Until the last two seasons the only infectious brood disease known to exist in Ontario was the one described aboue. But another kind has made its appearance. It is called European Foul Brood (spmetimes "black brood.")

European Foul Breed has destroyed the apiaries in great areas of different States in the Republic to the south of us. It is now known to be rampant in at least one section of Canada. In one way it is much more to be dreaded than American Foul Brood, because it runs its course and destroys an apiary much more rapidly, and because the adult bees will carry out the disease scales and scatter them in the yard and farther, to find their way into healthy colonies.

In the part of Ontario where it is known to be apiaries were wiped out at first something like this :

112 colonies reduced to 23 in two years.

180 colonies reduced to 21 in one year.

60 colonies reduced to 44 in one year, and the balance all deseased the second year.

The symptoms are easily distinguished from those of American Foul Brood, as there is no ropiness, and the odor is different. The larvae mostly die without uncoiling from their natural early position. The color in the earlier stages is lighter than in American Foul Brood. The odor is very pronounced and offensive, like decayed fish; in fact, on a warm moist morning, it is noticed on entering the apiary, and when a diseased comb is held up for inspection is almost sickening.

The McEvoy treatment is effectual if applied to the whole apiary at once, even though only a few colonies show the symptoms. Even then the cure is only permanant when pure-bred Isalian queens are introduced to the affected colonies. It is quite impossible to cure an apiary of black bees of European Foul Brood without introducing pure Italian queens to all colonies.

We know of no reason why we should not expect this plague to sweep over Canada as it has over most of the United States. If it does, all apiaries of black bees will be practically destroyed within the next few years. Its progress in the one district mentioned above has been appalling. No Government expenditure can touch the situation without the intelligent co-operation of the men themselves whose property is in danger. There is a remedy, however, right at hand. Pure bred leather-colored Italian bees are almost immune to this disease, which works so much havoc among the common blacks.

It is very important, then, that all

(Continued on page 642.)

FARMER'S SONS !

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The Composition of Hay.

Now that the hay harvest is fast approaching, it is an opportune moment for asking ourselves, At what stage of growth should we cut the hay crop, in order to obtain the maximum amount per acre of nutritive matter throughout an entire season? It must be noticed, first, that we are to consider the yield of nutritive matter per acre; and second, that our view must extend over a whole season. It would be quite misleading to select certain species of grasses in our field or meadow, and fix the best time for cutting with reference so the amount of nu-

trient materials in these alone; we must make our analysis on a fair average sample of the whole crop when cut, and then calculate from that the total amount of digestible matter per acre. Thus we might find in a field of ryegrass and clover hay that, while the ryegrass had become over-ripe, and so less digestible, the increase in the amount of clover obtained by delaying cutting for a few days was more than sufficient to compensate for any such decrease in the nutritive value of the hay crop. This brings us to our second point.

We may delay cutting and so get a larger crop, both of total produce and of nutritive matter, but if this increase be obtained only at the expense of the aftermath, then our total yield of nutritive matter for the season may suffer. And there is always a great danger of this occurring. If we cut the clover plant while it is still in the vegetative condition, or at least before it has begun to mature its seed, then in the natural course of events it will produce an abundant aftermath; but once the vegetative period has ended, once seed-production has begun, then we need hardly expect to have such a large aftermath. As with the clovers, so with the grasses. Hence arises the popular and thoroughly scientific practice of cutting the hay crop just when the "bloom" is going off the ears of the grasses. At this stage, the grasses are found to contain the highest possible proportion of digestible matter for a hay crop, although in the majority of cases the clovers will not yet have reached their maximum growth. The farmer, however (instinctively, it may be), considers in what way he can best obtain the highest yield of nutritive during the whole season- and is unwilling to sacrifice the aftermath for the sake of a larger hay crop. He calculates, and rightly, too, that after flowering the grasses do not increase in total weight, and he knows from experience that stock do not so thoroughly relish hay which has been allowed to ripen its seed before cutting. Still, it cannot be denied that many farmers do err by allowing the grasses to become too ripe before cutting, in the hope of getting a larger yield of hay owing to tee continued growth of the clovers. As a general rule, it is safer to commence cutting even before the bloom is completely off the grasses, for not only may harvesting operations be delayed by unfavourable climatic conditions, but it may also happen that, where there is a large area to be dealt with, the later cut fields may be over-ripe before we can get at them, unless we commence in good time.

Date of Cutting.	Nitrogenous Substances: Abuminoids.	Nitrogenous Substances: Amides, &c	Fat	Soluble Carboey-drates	Fibre.	Ash
May 14	11.5	6.2	3.2	40.8	23.0	15.3
June 9	9.4	1.8	2.7	43.2	34.9	8.0
June 26	7.8	0.7	2.7	43.3	38.2	7.3

The figures given in each case the percentage of the ingredient in the dry substance. In another table, the same author shows the influence of age upon the digestibility of fodder plants. The meadow hay above referred to was fed to sheep, and the following co-efficients were obtained :—

Date of cutting		Proportion of each Constituent digested for 100 parts supplied. Total Organic Matter.	Nitrogenous Substance.	Fat	Soluble Carbohydrates	Fibre.
May	14	75.8	73.3	65.4	75.7	79.5
June	9	64.3	72.1	51.6	61.6	65.7
June	26	57.5	55.5	43.3	55.7	61.1

Now let us see how far we are justified in assuming that the nutritive value of the grasses and clovers diminishes as ripening proceeds. Here we must appeal to the chemical analyst, for, although the farmer satisfies himself on this point, as on many others, by appealing to the cow or to the horse, this is scarcely a reliable enough trial for the scientific observer. What we have to show is that, as ripening goes on, the percentage of the valuable digestible materials in the stems of the plants decreases. It is true there may be an increase of nutritive matter in the seeds, but in the case of grasses and clovers these have not proved suitable feeding stuffs either for man or beast. In general, we may say that, as the plants mature, "the proportion of water, nitrogenous matter, and ash constituents diminishes, while the proportion of carbohydrates and fibre increases; at the same time, the amides become more or less converted into albuminoids," which have, it is true, a much higher nutritive value.

Warington, in his "Chemistry of the Farm," gives the following table to illustrate the changes in compps-ition which take place in meadow hay as the grasses pass from the green state (14th May) to rhe flowering condition (9th June) and then to maturity (26th June) :—

Here we see very clear,y the marked difference in digestibility berween ordinary pasture grass and over-ripe (mature) hay, and if the experiment had been made with horses instead of with sheep, the diffecence would have been more accentuated. And numerous experiments, both on th Continent and in America, corroborate Warington's conclusions, both as regards composition and digestibility.

Enough has been said now to show that, even if we consider the hay crop alone, no advantage may be gained by delaying the cutting past the proper time—i.e., just when the "bloom" is going off the ears— for the increase in quantity may be counter, and perhaps even over-balanced, by the coincident decrease in quality—i.e., in digestibility.

In conclusion, the writer may say that he is well aware that there are other considerations which might have been touched upon in this paper, and which might have to a certain extent nullified the conclusions come to. For example, in a mixed crop of ryegrass and clover, it may well happen than an increase in the proportion of clover in the hay may render is more palatable to stock, and therefore perhaps more digestible. But these are, after all, subsidiary questions, which do not greatly effect our main argument for cutting hay just after flowering has occurred.—Scottish Farmer.

High Temper in Bulls.

High temper is an indication of the prepotent power in breeding. Some of the best sires in the world have been sacrificed right in their prime because they grew ugly, when it would have been well worth while to place borne with them much longer for the sake of the cows they could produce. Such bulls need hard work every day, on the tread power or in harness, to keep down their superabundant energy. Nothing tames high tempered men, horses and bulls, like plenty of hard work.

But we must never forget that the bull is the fountain head. This is just as true in poor qualities as in good. "The other day," says Hoardjs Dairyman a farmer in this vicinity spoke to us about the bad mistake he made at the start in buying a poor registered bull because he could get him cheap. He said it wodld have been money in his pocket, if he had paid $500 for a bull that was worth it rather than to have used the bull he did."

Ingalls' Rhapsody on Grass.

Next in importance to the divine profusion of water, light and air, those three great physical facts which render existence possible, may be reckoned the universal beneficence of grass. Exaggerated by tropical heat and vapors to the gigantic cane congested with its saccharine secretion, or dwarfed by polar rigors to the fibrous hair of northern solitudes, embracing between these extremes the maize with its resolute pennons, the rice plant of southern swamps, the wheat, rye, barley, oats and other cereals, no less than the humble verdure of hillside, pasture and prairie in the temperate zone, grass is the most widely distributed of all vegetable beings and is at once a type type of our life and the emblem of our mortality. Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than the minute tenants of that mimic wilderness our earliest recollections are of grass; and when the fitful fever is ended, and the foolish wrangle of the market and forum closed, grass heals over the scar which our descent into the bosom of the earth has made, and the carpet of the infant becomes the blanket of the dead.

Grass is the forgiveness of nature —her constant benediction. Fields tramped with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass grown like rural lanes, and are oblitered. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleagured by the sullen hosts o winter, it withdraws into the im pregnable fortress of its subterran ean vitality and emerges upon th first solicitation of spring. Sown by the winds, the wandering birds, propagated by the subtle horticultur of the elements which are its minis ters and servants, it softens th rude outline of the world. Its tenac ious fibers hold the earth in its place, and prevents its soluble com ponencs from washing into the wast ing sea. It invades the solitudes of deserts, climbs the inaccessible slopes and forbidden pinnacles of mountains modifies climate and determines the history, character and destiny of nations. Unobtrusive and patient, it has immortal vigor and aggression. Banished from the throughfare and the fields, it bides its time to return, and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled, but which it never abdicates. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet, should its harvest fail for a single year famine would depopulate the world.

The PUBLISHER'S DESK.

The Windsor Supply Co., of Windsor, Ontario, are selling their Windsor Cream Separators direct to the consumer, instead of through agents. They claim it is the most economical method and that they are able to sell their machines at about half the usual figures. They will send description and prices on request.

Summer Cruises in Northern Seas. —In connection with inauguration of the Grand Trunk Pacific Steamships on the Pacific Coast on June 12th, the Company has issued a very handsome and interesting booklet describing the new boats and the scenic

Peerless Lawn Fence

Is Strong and Attractive. All the wires are uniformly crimped, large gauge, steel spring wire, heavily galvanized and coated with white enamel paint. Never sags, never rusts. Improve your property with a Peerless Fence. Cheap as wood and more handsome and durable. Also full line of farm and poultry fence and gates. Write for information.

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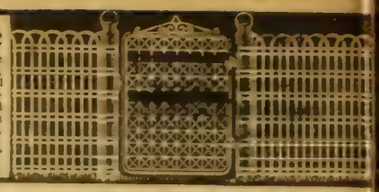

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Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all women's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

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The cover of the booklet is a triking one, printed in four colors. Copies of this publication can be ad free on application to J. QUINLAN, D. P. A., Montreal.

"The Wyandottes."—We are just n receipt of a revised edition of a book entitled "The Wyandottes" published by the Reiable Poultry Journal, Quincy, Ill., and find that it is an authoritative est book and instructive treatise deoted to the different varieties of Wyandottes, viz:Silver Laced, Golden, White, Buff, Black, Silver Penciled, Partridge and Columbian. The est and illustrations are based on he changes to appear in the 1910 American Standard of Perfection, and the book is invaluable to breedrs of Wyandottes who wish to anicipate future Standard requirements. It was edited by J. H. Drevenstedt, a breeder and judge of twenty-five years experience.

"The Wyandottes" consists of 160 pages 8 ½ x 11 ½ printed on first-class paper and is bound in heavy paper with a handsome embossed cover design. It is fully illustrated by Franklin L. Sewell, A. Of Schilling, I. W. Burgess and others, and in addition to eight full-page latest typo Wyandotte charts by Sewell, there are three Sewell color plates of Silver Laces, White and Partridge Wyandottes.

The price of "The Wyandottes" is $1.00 per copy, postage prepaid.

Growth of Rural Telephones.—To anyone who travels the country roads, one of the most striking features is the continuous evidence of the growth of the rural telephone. Even the most remote and sparsely settled parts of the country have their strings of wired poles, spreading like a network along highway after highway and branching off here and there to take in some farmhouse that, were it not for the connecting link of electricity, would indeed be isolated.

Pleasant View Farm For Sale.

Farm in best fruit section of Annapolis Valley containing 115 acres land. About 40 acres orchard, 2000 trees mostly apples, but includes pears, plums, etc., 1¼ acres raspberries Good pasture and plenty of wood, fine place for dairying. 3½ miles from Middleton and Wilmot, 1½ mile from church, ½ mile from school, daily mail. 8 room house, barn room for 10 head cattle and horses, barb wire fencing, soil varies from sandy loam to clay loam with clay subsoil. Reason for selling, owner engaged in other business which requires all of his attention. For price and terms apply to the owner.

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The call of the telephone bell is no uncommon sound in the farmhouse today. Men are called for the threshing, prices are learned, buying and selling is done, orders go to the butcher and the grocer and friendly gossip and chat are all among the many things that keep the busy rural lines buzzing. The farmer with a telephone is no more isolated than his brother in the city, indeed, often far less so; for the city man as a rule, does not know his next door neighbor. The farmer knows everybody and thanks to the wonderful invention of Prof. Graham Bell, can talk to them all any day or minute of the night. To comment on the value of the telephone to the farmer, from the standpoint of prices and markets would be almost superflous when one considers to how greas an extent the instrument is used for just this purpose.

"My telephone," says one farmer," has, I calculate, paid for itself fifty times over since it has been installed. The times when it has told me to sell and the times when it has told me to hold for higher prices, are numerous.

"More than that, our company is only a little independent concern owned just among ourselves. Yes, I suppose you can credit me with a good part of its organization," he said in response to an enquiry. "You see, it happened this way; I noticed the advertisements off one of the big electrical supply houses and got interested. I wrote these people for their book on the organization of rural telephone companies and they sent me full information on how to proceed. They told me everything I wanted or needed to know, told me a lot of things that I never even knew there was to know. They told me not only about their telephones themselves, but posted steps that I had to take to organize. All I had to do when I gat that information was to go out to my neighbors and you bet, I was able to answer anything they asked me. Say we had a telephone company organized and operating almost before you would know it and there's not a single one of our men today who would go back to the old way of doing without a 'phone for anything.

"No, it didn't cost us much. There's nothing prohibitive about the cost and, as I told you, we own the company among us. Last year, we paid a good dividend and it will be only a question of a few years till we have back every cent we invested and a telephone service into the bargain. Our running expenses are almost nothing, just the cost of maintenance and the salary of a girl at central. It's not worth speaking of. That's one advantage, you see, of a co-operative company such as ours.

"It's a surprising thing to me that more farmers don't organize telephone companies of their own. I believe they're doing it now more generally than they used to but there are lots more that would and could organize if they only knew how simple it was to get started and how great the benefits were.

"If there's one thing that I would advise more than another, it would be for some farmer in every locality to write in to one of the big telephone supply-houses and find out what they have to tell him. There's no reason either, why one man could put it off expecting another to do it; write yourself. Rural telephones are a thing a farmer can't know too much about, especially when there are concerns who are ready to tell him everything and not charge him a cent for the information.

"All I ever invested for the knowledge was a two cent stamp and I read over the books they sent me in the evenings.

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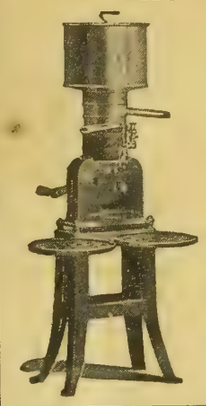

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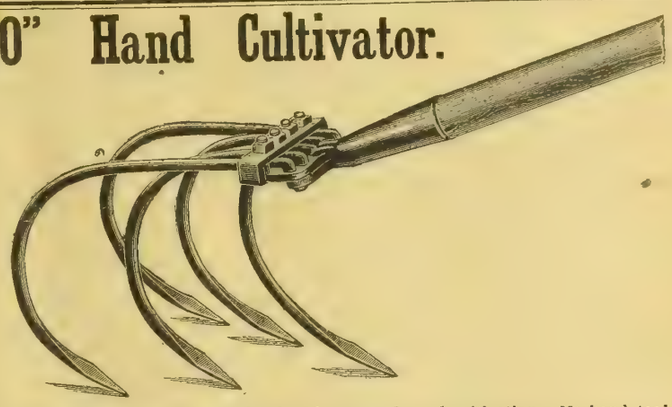

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The Maritime Farmer
SUSSEX, - N. B.

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It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

Three Bacterial Troubles of the Apairy

(Continued from page 638.)

apiaries, especially in or near infected neighborhoods, should be Italianized at once, without waiting for a destructive outbreak of disease.

STARVED OR PICKLED BROOD.

A disease slightly resembling Foul Brood is called by some "Starved Brood," and by others "Pickled Brood." The most positive difference in the dianosis of this disease is the absence of ropiness and of the glue pot smell, which are always found in American Foul brood. In Pickled Brood the larva decays from the inside leaving the skin tough and in its ratural shapr; in E. F. B. or A. F. B., the skin of the larva softens as the contents become glutious, and all the natural wrinkles become smooth as the mass settles to the lower side of the cell. In P. B. the larva often dries up so as to become loose in the cell and fall out when the comb is inverted. In A. F. B., it always cements fast to the lower cell wall, so it cannot be removed without tearing the cell. E.F.B., attacks the larva generally at an earlier stage in its existence than P. B.

The cause of Pickled Brood is not definitely known. It is not considered to be infectious. McEvoy asserts that it is caused by an insufficient feeding of the larvae, due to a sudden check of the honey flow, or a constitutional weakness of the workers. The latter he charges to inbreeding of the queens. Re-queening with vigorous queens from other apiaries will often effect a cure and it often disappears of its own accord.—Ontario Department of Agriculture.

MARKETS.

Charlottetown Prices.

Grain.—Oats 34 to 42c.

Feedstuffs.—(Retail) Bran $1.15 to $1.25; Shorts $1.30 to $1.35; Middlings 1.35 to $1.40; Oil-Cake $2.00 to $2.25; Corn Meal $1.75.

Live Stock.—Butcher's Cattle 5 to 6c. live weight; Milch Cows $35, to $55.00; Sheep 4 to 4½c; Lambs $2.75 to $3.50; Young Pigs, pair, $6.00 to $8.00.

Dressed Meats.—Beef (Carcass) 9½ to 10½c; Mutton (Carcass) 9c.; Veal 5 to 5½c.

Dairy Products.—Creamery Butter 22c. solid, 23c. pts; Dairy Butter 17 to 19c; Cheese 10½ c.

Poultry and Poultry Products.—Eggs 14½c; Fowl 12c.

Fruit.—Strawberries 12c box retail. Potatoes 25c, to 35c.

Miscellaneous.—Hay $10.00 to $10-50; Straw $6.00; Wool Wool 22c., to 25c; Beef Hides 8c; Calf Skins 10c; Sheep skins 75 to $1.00; Lamb skins 15c; Quohaugs 70c.

Trade in general has been fair since our last report, produce markets are still in rather bad shape but potatoes are in better demand, blues are reported rather scarce and some inquiring for reds. Farmers can now get 25 to 30 c. for blues and 20 to 25c. for Reds. Hay on the other hand is easier and the demand limited with generous supplies offering. The prospects of a heavy crop this year is causing farmers to push off the surplus stocks and is having a depressing effect on the market in general. Oats is about unchanged with very little moving and a wide range of pfices, whites for shipping are worth about 34 to 36c but with very little changing hands and dealers who have stocks on hand which cost 42 to 42 c, last winter are not willing to accept today's prices and are not willing to buy more unless at reduced prices. Black oats are scarce and are in small supply and bring from 40 to 42c, for shipping and the bulk of what is offered goes to supply the local demand at the outside figures in some cases a cent or two more. Butter is dull, supply is ample for present demand and there is a wide range between Dairy and Creamery. Factory men might be disposed to accept lower prices than our quotations for round lots as we understand there is quite a lot accumlating at some of the factories. This was cheese board day and there was boarded about about 3000 boxes, almost all of which sold at 10½c. One or two factories did not sell on the board and it is understood that they realized 1.16 more, which would equal last board day 10 9-16. Eggs are lower and the market weak 14½c., is the outside price today for full count job country points. Conditions are most favourable for an abundant harvest.
July 8th, 1910.

St. John Prices.

Grain.—Oats 45c. bushel.

Live Stock.—Milch Cows.—$30.00 to $60.00.

Dressed Meats.—Beef (carcass) 6 to 11c; Beef (Retail) 10 to 25c., lb; Mutton 6 to 9c; Veal 6 to 10c; Lamb 14 to 15c; Pork 10 to 11½c.

Dairy Products.—Creamery Butter 24c; Dairy Butter 18 to 21c; Cheese 13 to 14c.

Poultry and Poultry Products.—Eggs 18 to 20c. doz.; Fowl 70 to $1.30; Chickens 50 to $1.00; Ducks 60 to $1.00; Turkeys 14 to 22c, per lb.

Vegetables.—Potatoes $1.00 to $1.30; Turnips 60 to 85c bushel.

Miscellaneous.—Beef Hides 9c; Calf Skins 15c; Sheep Skins 15 to 20c; Lamb Skins 35c.

HAD HEART T

LIFE WAS A BUR

MILBURN'S HEART AND NERVE PILLS CURED HIM.

Mr. Elexander McKay, Port Philips, N. S., writes:—"Seeing testimonials in the B.B.B. Almanac of how many poor sufferers had been helped by Milburn's Heart and Nerve Pills, I thought mine would not be amiss. I am a man of fifty-four years, and have a family of five children. About two years ago I was a sufferer from heart trouble, and life was a burden to myself as well as others. I could not lie on my left side and sometimes I would nearly choke, and was very nervous and run down. My father, a very old man of eighty-five years, told me that he often heard people recommend Milburn's Heart and Nerve Pills to be a great cure so thought it would do no harm to give them a trial, but I had very little faith in them. My wife went to the store and got me two boxes, and before I had used the last of the first box I noticed a change, and before the second box was done I was cured and am a well man to-day."

Price 50 cents per box, or 3 boxes for $1.25 at all dealers, or mailed direct by The T. Milburn Co., Limited, Toronto, Ont.

SEALED TENDERS addressed to the undersigned and endorsed "Tenders for supplying Coal for the Dominion Buildings" will be received until 4.00 P. M., on Tuesday August 16 1910, for the supply of Coal for the Public Buildings throughout the Dominion.

Combined specifications and form of tender can be obtained on application to this office.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, equal two ten per cent (10 p. c.) of the amount of the tender which will be forfeited if the person tenderling decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
R. C. DESROCHERS,
Asst. Secretary.

Department of Public Works,
Ottawa, July 6, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910

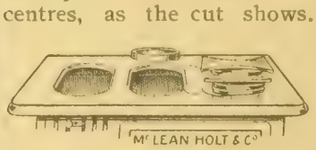
Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

If You Want to Save Trouble on Wash Days, Then Buy a GLENWOOD RANGE.

Yes, when you have a Glenwood Range in your home, you can shift your wash boiler to the back of the stove by shifting the centres, as the cut shows. The Glenwood Ranges have been proven a success by the hundreds that are using them.

We are getting enquiries for them all over the Maritime Provinces, which shows that the Glenwood Ranges are taking a hold through the provinces as well as in St. John, where they are made. We have the stoves that the people want and we neither spare time or money to make them just what we say they are.



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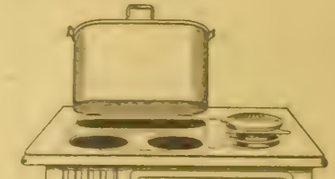

This cut after changing.

We prepay all freight to your station. Send for our Catalogue. We have Ranges from $25.00 up.

MADE AND SOLD BY

McLEAN-HOLT & CO., - 155 Union St., - ST. JOHN, N. B.

THE MARITIME FARMER

AND

CO-OPERAIVTE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., July 26, 1910. Number 20.

Butter Defects and How to Correct Them.

The following extract from a bulletin, written by Prof. M. Michels, of the University of Wisconsin, are intended as a ready reference that will aid the butter maker in locating the common defects found in butter; their probable cause and a remedy that may be applied.

A DEFINITION OF GOOD BUTTER.

Flavor: should be rich, pleasing, creamy and suggest nothing objectionable to either the taste or smell.

Body, should be firm and waxy.

Color, should be even showing a luster and an oat straw shade unless the particular market wants a dfferent color.

Salt, well dissolved and just enough to bring out the highest flavor of the butter.

Package, clean and neat in appearance.

BUTTER FLAVOR DEFECTS.

I. Curdy Flavors: Indicated by a sour cottage cheese smell and taste.

Causes: 1. Adding wheyed-off starters to the cream.
2. Adding an over-ripe starter while the cream is at too high a temperature.
3. Ripening a very thin cream at a high temperature.

Remedies: 1. Do not use a starter that shows whey on top.
2. Never add a high ripened starter until the cream is cooled
3. Cream should test 30 per cent or more butter fat, a lower testing cream should not be ripened much above 60 degrees F.

II. High Acid Flavors: Indicated by an excessive sour smell and taste.

Causes: 1. Over-ripening of the cream before churning.
2. The use of an over-ripe starter.
3. Receiving part of the cream in an over-ripe condition.

Remedies: 1. Develop less acid in the cream before churning.
2. Do not use a starter having over 0.70 per cent acid.
3. Cream containing over 0.50 per cent of acid should not be mixed with sweeter cream, but churned separately.

III. Lacking Flavor: Lacking taste and smell.

Causes: 1. Churning the cream too sweet.
2. Too much washing of the butter granules.
3. By using a dead or inactive starter.

Remedies: 1. Cream should not contain less than 0.45 oer cent of acid, even when a light flavored butter is wanted.
2. When butter is churned at low temperatures, one washing or rinsing is sufficient.
3. Never use a newly prepared starter until it sours readily.

IV. Rancid or Old Cream Flavors: Smells and taste like old cream or old butter.

Causes: 1. Over-ripening the cream.
2. Holding the ripening cream too long before churning.
3. Ripening the cream at very high temperatures.
4. Holding some of the cream or milk too long before churning.
5. Keeping the butter at too high a temperature after churning.

Remedies: 1. When cream is kept over night to be churned the next morning, it should not contain more than .55 per cent of acid.
2. Cream should not be cooled down after ripening with the idea that it will keep its fine, creamy, acid flavor until churned several hours later.
3. Start ripening the cream below 68 degrees F.
4. Old or over-ripe cream or milk should not be mixed with sweet cream, but churned separately. Milk or cream, even under the most favorable conditions, should not be kept longer than two days.
5. After churning, keep the butter in the refrigerator at a temperature of 50 degrees or below.

V. Oily or Greasy Flavors: Indicated by an oily and greasy taste and smell.

Causes: 1. Holding the milk or cream at too high a temperature before delivering to the creamery.
2. Ripening, churning and working when at too high a temperature.
3. Using a poor grade or too much butter color.

Remedies: 1. Hand-separator cream should be cooled to 60 degrees within an hour after separating.
2. Do not ripen the cream above 65 degrees F. Churn and work at low enough temperatuee so that one washing of the granules will take out all of the butter milk, it will then be in such condition that the butter will not turn greasy while being worked.
3. Never use bad smelling color or one that has a sediment at the bottom; use no more color than is necessary to satisfy your trade.

Vl. Fishy Flavors: Indicated by a bad taste and fishy smell.

Causes: 1. Uncleanliness in handling the cream and milk at the farm.
2. Leaky cream or milk vats at the creamery.
3. May be produced by certain species of bacteria.

Remedies: I. Keep separators, pails, cans and takns for cooling clean at all times.
2. Never use a leaky vat, dipper or can for handling milk or cream.
3. If produced by certain species of bacteria it is certain that they grow in dirt, hence cleanliness is necessary.

VII. Stable Flavors: A bad taste and cow stable smell.

Causes: 1. Uncleanliness in milking.
2. Keeping the cream or milk in or near a dirty cow stable.

Remedies: 1. See that the stable and cows are clean before milking and milk with clean, dry hands.
2. All milk should be removed from the stable as soon as milking is finished. Never keep the milk or cream near the stable or manure piles.

VIII. Bitter Flavors: Indicated by a bitter taste.

Causes: 1. Holding cream too long a time at low temperature before churning.
2. May develop in the starter.
3. Bacteria brushed from the cow's udder while milking.

Remedies: 1. Cream should not be held at well-water temperature more than two days. Bitter flavors are often noticed in cream which is hung in the well or set in the spring for three or four days.
2. Set the starter with a small amount of mother starter at 70 degrees F. rather than a large amount at 55 degrees. (One quart of starterline to 100 pounds of pasteurized skim milk is sufficient.)
3. Milk clean cows in clean stables by clean hands.

IX. Weedy and Food Flavors: Indicated by weedy and food smell.

Causes: 1. Cows feeding on weeds.
2. Feeding strong scented food just before or during milking.
3. Exposing milk in an atmosphere laden with objectionable food flavors.

Remedies: 1. By giving cows a plenty of good pasture feed they will not eat weeds wnough to flavor the milk.
2. Do not feed silage, brewer's grain or slightly decayed feed shortly before or during milking.
3. Do not keep milk in the same room with feed of any kind.

X. Unclean Flavors: Unclean smell or taste.

Causes: 1. Dirty cans and milk utensils.
2. Dirty water may cause an undesirable aroma, but nothing objectionable to the taste.
3. Impure air and dirty starter may give an undesirable taste but nothing objection able in aroma.
4. When the judges fail to find words to describe a flavor, this expression is used as a last resort.

BODY OR TEXTURE DEFECTS.

1. Weak Body: Soft and weak when pressed with thumb or finger; sometimes coarse in appearance.

Causes: 1. Ripening, churning and working at too high temperatures.
2. Cream not cooled long enough before churning.
W 3. Too much moisture in butter.
4. Character of the butter fat.

Remedies: 1. Ripen, churn and work the butter at as low a temperature as practicable.

Houdan Cock.
Bred and owned by Dr. G. W. Taylor, Houdan Specialist, Orleans, Ind.

2. Remember that with cream churned right after being cooled down from 60 degrees, the churning temperature may have to be lowered to 50 or below, while cream kept at 55 over night may be churned safely at 57 to 58.

3. By employing the ordinary methods of washing and working not over 16 per cent of moisture will be left in the butter.

4. Change the feed of the cows. This trouble is seldom found in the butter fat from mixed herds.

II. Greasy Body: No grain, dead in appearance.

Causes: 1. Over-churning of the butter.

2. Over-working.

3. Washing the butter granules in too warm wash water.

4. Churning and working at too high temperatures.

Remedies: 1. Stop churning when the granules are about the size of wheat kernels.

2. Work the butter no more than is necessary.

3. Never use wash water above the temperature of the buttermilk when drawn.

4.Churn at low temperature so that the butter granules will not stirk together while washing.

III. Body Showing Too Much Moisture.

Causes: 1. Stopping the churn when the granules are too fine.

2. Under-working the butter.

Remedies: 1. Churn granules to the size of wheat kernels.

2. Work but once and until smooth and waxy.

IV. Mily Brine.

Causes: 1. Churning at too high temperatures.

2. Over churning.

3. Improper washing.

Remedies: 1. Churn at lower temperatures so that the granules will will not stick together.

2. Churn until the granules are about the size of wheat kernels.

3. Fill the churn with wash water to about the same height in the churn as the cream occupied when the churning started.

V. Color: Mottled appearance.

Causes: 1. Uneven distribution of the salt.

2. Using too cool or too warm wash water.

3. Not enough moisture in butter when worked.

4. Churning too warm.

Remedies: 1. Distribute and work the salt evenly.

2. Have the wash water about the same temperature as that of the buttermilk when drawn.

3. Leave enough moisture in the butter so that the salt will readily dissolve while working.

4. Churn the cream at a temperature low enough to prevent the granules from sticking together and allow the buttermilk to be washed out, then salt is quickly and more easily distributed and dissolved. Streaked butter is simply a mild case of mottles.

VI. Color Specks: Tiny color specks which appear throughout the butter.

Causes: 1. Using a poor grade of color.

2. Allowing the color to become too old.

3. Keeping the color at too high a temperature.

Remedies: 1. Buy only the best grade of color.

2. Buy in small quantities.

3. Never keep the color near a radiator or boiler.

VII. Salting Defects: Indicated by taste.

Causes: 1. Too course, gritty.

2. Unevenly distributed.

3. Too low or too high.

Remedies: 1. Leave enough moisture on the granular butter and work sufficiently to dissolve the salt.

2. Distribute evenly and revolve the churn a few times before setting rollers in motion.

3. Too little salt often fails to bring out the best flavor. Too much salt leaves a coarseness of taste that covers up the fine, creamy flavor so much desired in butter.

Houdan Hen.
Five years old and still laying. Bred and owned by Dr. G. W. Taylor, Orleans, Ind.

VIII. Package Defects:

Causes: 1. Bad appearing, dilapidated package.

2. Badly trimmed and dirty on top or sides.

3. Butter not packed solid.

Remedies: 1. The package and covers must look neat and clean and not be too old.

2. Cut top of butter with a string or wire and wipe the dust out of the cover before placing it on the tub.

3. Pack small amounts of butter in the tub at a time and use the packer after each addition. Strip the tub from the butter occasionally and note the appearance of the butter surface.

Our Prince Edward Island Letter.

Editor The Maritime Farmer :—

An unusually, warm, early spring with an abundance of rain, followed later by cool, cloudy, damp weather in June has again demonstrated the value of fertile, well cultivated soil, as extreme conditions of weather always do.

Early sown grain on good soil has come along well and promises, at this writing, July 12th, a very heavy yield. Later grain, especially on cropped out land, looks washed out and hungry, but as we have had several days of warm, ideal weather it may come out alright yet, as grain is the hardest of all farm crops we grow, to form any correct estimate of, up to the very time of harvest.

Hay, where the land is at all rich, will be the heaviest crop in years. Seldom have we seen so much clover in our second cut, and pastures are ideal being full of white clover and fresh as in early Spring. This is indeed the dairyman's year, never have we seen fall calved cows, or any other milk cows for that matter, keep up such a regular flow, although I never could see why the large majority still think it profitable to keep cows idle practically all winter feeding just about enough to lose what is fed, and then land their cows on the grass in the spring so thin that they again lose the first flush of grass, picking up what should be kept on them in winter.

A Grand Houdan Pullet.
The making of a fine Exhibition Hen. Bred and owned by Dr. G. W. Taylor, Orleans, Ind.

With all that is published in Farm journals these days in every concievable form along with the numerous lectures on this subject, trying to rub in the common truths that are well known to every intelligent stockman:

How a certain amount of food is required to sustain the cow, only what she consumes above that can profit be made from.

How, if we keep her eating five days what she could digest or assimilate in three we haue wasted two day's feed.

How much easier it is to keep a well conditioned animal gaining, than to start a thin one up.

How much just a little more feed added to what lets a cow grow thin would have kept her gaining.

How necessary it is to develop a good dairy cow (and more especially a heifer) that we keep her fattening when she is dry.

How easily and natural it is for a cow to put on fat rapidly the last two months before calving. We who have ever dressed a "has been" for beef will have noticed the immense amount of tallow stored around the intestines and kidneys, nature storing away for the extra strain of feeding the calf. All these and many such truths are accepted by almost every intelligent man, but only a very few will put them into practice, and we repeatedly see cows yet carrying their old hair in June.

If our farmers, and those who would be dairymen, could be made to understand all the very many other advantages of intelligent feeding such as the fact that when we feed well at any season we not only receive more milk at the time and greater profit but the effect of that same feed will be noticable through the entire year. That is if we feed well in summer the flow will be kept up for a longer period and greater profit will result from fall and winter feeding and if we continue in winter the effect will be felt during the next summer. Our heifers will be many times better cows and accidents and loss from sickness due to poor condition will be much less common.

We are having institute meetings during the past few weeks over almost all the province, addressed by experts, in different branches of agriculture, from the upper provinces.

Just how much value these meetings are it is difficult to estimate, but I am afraid that few of the men most neediog this education attend. Although this would seem to be the most suitable time of year for holding these meetings, still the long twilight of our sdmmer euenings now keep men from assembling in anything like decent time as few will go to a meeting before the lights are on. Garden parties, picnics and the like often butt in and these meetings cannot stand such opposition. And while much is often to be learned (though not always) at these meetings, nothing influences any given district, nothing increases or promotes the sound dairy sentiment, like "demonstration" dairy work. Let any number or even one farmer begin to make a success of any special line and the effect is at once noticed around even amongst his critics, and could we drop an up-to-date Danish or other successfull dairyman in every settlement we would have done more to influence the province to this line of farming than any number of lectures will ever do, (not that we despise them either). Dairying would mean for this province what no other line of farming that now is, or can be carried on, could do. We here are limited to our 1,000,000 acre farm, our only hope for development is to build on top of that acerage. Just what it would mean to make every acre doubly productive, to carry twice as large a population on the land and double as many in our towns and villages with little increase in keeping up our public utilities I will leave your readers to estimate.

And when we can make the man who says "give me manure and I will farm as good as any of them" understand that he can grow all the manure that he has a mind to, that he can create conditions on his farm that will assure him a steady increased yield of crop and manure, and at the same time yield him greater profits than shipping his grain produce would do, then and only them can we make this province the little Denmark that nature intended it.

We have here a moderately costing fertile and easily cultivated soil, a cool, moist climate, the cheapest labor, and the best market in Canada, a temperate climate, a country noted for its beautiful scenery. When will we awake to our possibilities and check this mad rush to the west, overlooking opportunities fully as great and a much more desirable country in which to live.—W. M. Lea, Victoria, P. E. I.

Farm Drainage Operations.

(Continued from last Issue.)

SIZE OF TILE.

The size of tile in the main drain depends upon three factors, namely, the quality of soil, number of acres to be drained by this main, and the slope of both main drain and laterals Below is a table worked out by McConnell and recopied from a report from Prof. W. H. Day, which will act as a general guide :

TABLE OF SIZE OF TILE PIPE OF MAIN (McCONNELL.)

Fall.	Acres Drained.					
	3-Inch Tile.	4-Inch Tile.	6-Inch Tile.	8-Inch Tile.	10-In. Tile.	12-In. Tile.
1 foot in 20	18.6	26.8	74.4	150.0	270.0	426.0
1 " 30	15.1	21.8	60.4	128.0	220.8	346.0
1 " 40	12 9	18.6	51.6	108.8	189.6	398.4
1 " 50	11.9	17.0	47.7	98.0	170.4	269.0
1 " 60	10.9	15.6	43.4	90.0	156.0	246.0
1 " 70	10.0	14.5	39.9	83.0	144.4	228.1
1 " 80	9.3	13.4	37.2	77.0	135.0	213.0
1 " 90	8.1	12.6	35.0	72.5	127.0	200.5
1 " 100	7.3	11.9	33.1	69.2	120.6	190.5
1 " 150	6.7	9.5	26.6	56.0	97.3	154.4
1 " 200	5.7	8.2	22.8	48.0	83.9	132.5
1 " 250	8.1	7.5	20.4	42.4	74.4	117.0
1 " 300	4.6	6.9	18.4	38.2	65.5	107.0
1 " 400	4.1	5.9	16.5	32.6	60.3	90.7
1 " 500	3.7	5.2	14.8	30.1	54.0	81.6
1 " 600	3.3	4.7	13.3	28.0	48.6	74.0
1 " 800	2.9	4.1	11.4	24.0	41.9	65.0
1 " 1000	2.6	3.7	10.2	21.2	37.2	56.0
1 " 1500	2.1	3.0	8.5	16.8	30.8	47.0
1 " 2000	1.9	2.8	7.4	15.0	25.0	40.8

DEPTH AND DISTANCE APART.

These two factors are, to a certain extent, controlled by the size of tile. The distance between drains depends largely on the kind of soil. In general cases underdrains in clay soil should be no more than 45 feet apart; in sandy soils 75 to 100 feet, with the average depth of, say 3 feet. This would hardly apply to swamp lands, nor can any fixed rule be laid down. However, in soils needing drains this will act as a guide. In both above cases the water table would be about 1½ feet from the surface, at a distance midway between the two lines of tile. But if the depth of these tiles be only 2½ feet then the drains must be closer together in order to keep the water table sufficiently low. Drains must be placed below frost level, and then deep enough as neehed to insure satisfaction. Knowing that the water table is curved higher between drains than at the tile, we would advise digging drains from 3 to 3½ feet in depth, but owing to the many influences in our irregular land surfaces and formations, each farmer has a distinct problem and knowing his condition better than others must use his own judgment.

MAPS AND RECORDS.

How many farmers who have underdrained could tell exactly where each drain is located? And what of his successors? It takes but a short time to make a complete map of the farm with all drains charted exactly to a convenient scale. This, with other records, should be both useful and valuable in locating obstructions in tiles, or in constructing new drains.

ESTIMATE OF COST.

The pertinent question is, how much will drainage cost? Let us consider in order, the various items of expense. After a more or less careful survey of the land by either farmer or surveyor, the number of tile needed is known. The cost and weights of the same may easily be obtained from the nearest factory, and expense of freight and hauling readily estimated per ton.

As to the cost of digging, we have already stated that this depends largely upon the nature of the soil. This work is usually contracted for, and estimated per rod. Digging by hand a ditch 3 feet deep in heavy soils, the cost would be from 65c, to 70c. per rod, and on light soils, the cost would be 30c. to 40c. Digging by hand and plow, the cost would be lessened, in the former case to 40c. or 50c., and in the latter 25c. to 30c. per rod. The digging machine previously mentioned will greatly lessen this outlay. This machine is manufactured by the Buckeye Traction Ditcher Co., of Findlay, Ohio, there being several models, but the machine purchased is an average size for digging to a depth of 4½ feet. Where these machines have been used, the average charge per linear rod is 7c. for each foot in depth, or 21c. per rod in a 3-foot ditch. Add to this 2c. per rod for fuel and 1½c. per rod for the board of two men, the total coss is 24½c. per rod. This machine digs from 90 to 120 rods per day easily and owners make big money, while compared with other methods, the farmer saves. This machine, purchased by the Nova Scotia Government, will be used in as economic a manner as possible to cheapen cost, to stimulate drainage, and perform this operation for the farmer when, owing to dryness of midsummer or a lack of labor, other methods would be impossible.

The cost of filling ditches with the team and scraper if from 10c, to 15c. per 100 feet, as compared with 25c. to 35c. when done by hand. Provided the farmer does his own surveying, laying out of drains and superintending, all costs have been included.

Before closing, I would like to draw the attention to the possibilities of disputes as to outlets or drains running across neighboring lands. "The Drainage and Water Course Act" (Chapter 67, Vol. 1, Revised Statutes for Nova Scotia, 1900,) provides for such contingencies. According to this Act, owners of adjoining lands are compelled to give natural outlets for drainage water, and assist in sharing the expenses for the same. It also provided necessary appointments of engineers, inspectors, contractors, etc., as well as the regular procedure according to law should there be any disputes over the same. Limited space permits only the mentioning of this Act, but by so doing it may aid someone in perplexity over such matters.

As to the profits and benefits of drainage, much might be said. Surely if drainage will make our soils earlier, better aired, sweeter, warmer, deeper, and more drought resistent; if it will give proceeds from waste land which before drainage produced nothing; if it will double the annual production of many other areas, or diminish the costs of management and farm operations by reason of doing away with rough, broken fields, open ditches, etc.; if it will change diseased breeding swamps barnyards, etc, into useful productive healthy estate; if it will do all this and much more, then it is not worthy of our most careful consideration.

It has been the aim of the writer to suggest a few practical improvements to farmers uninterested in or using older and inefficient methods of drainage. Few of these ideas are original, but have been gathered from various sources and experiences, but all are practical and easily understood. May the interest in this most important need of drainage grow rapidly. The results have been proven highly profitable, financially and otherwise, in almost every case.—Prof. E. S. Archibald in 1909 Report of the Nova Scotoa Department of Agriculture.

Description of the Buckeye Traction Ditcher.

Among the many labor saving devices used by the farmers, should be classed the ditching machine. This is an appliance to cut drainage ditches for ordinary tile, and, as proven by actual test, it does the work better, faster and far more economically than is possible by hand-labor.

Drainage is no longer an experiment, but a necessity. Proper drainage is always a good investment, at least causing a heavier production and of better quality. It is therefore of interest to note any improved method pf accomplishing this end.

Of the several makes of such machinery, mention will be made only of the one which, in the writer's judgment, is the most satisfactory and efficient to meet varying conditions.

The Buckeye Traction Ditcher (manufactured by The Buckeye Traction Ditcher Co., Findlay, Ohio, U. S. A.,) has been on the market for thirteen years, and is a machine in wide use throughout the United States and Canada. Those being operated in this country are said to be giving good results. As Canada is a big field, one needing extensive improvements, it is well to consider the adaptability of such an invention to our local conditions.

The Buckeye Traction Ditcher is built on the principle of a traction engine, on the rear end of which is mounted an excavating wheel provided with excavating buckets fastened to its circumference, as shown in the accompanying illustration. This excavating wheel is an "open wheel;" that is, it has no axle, but revolves upon anti-friction wheels placed outside the rims of the cutting wheel. The excavating buckets connecting the two rims, have a top and back, but no bottom, being rather bowl-shaped. As the wheel revolves, each bucket cuts off a slice of earth, filling it, and the dirt is then carried over a steel stationary arc fastened between the rims, to the top of the wheel and dropped upon the belt conveyor. The stationary arc prevents the excavated earth from falling out of the bucket until it reaches a point above the conveyor.

The cutting wheel, which can cut to a depth of almost two-thirds its diameter, is revolved by means of a pair of driving sprockets. The latter mesh with segmental gearing directly above the actual cutting surface so that no power is lost in transmission. This excavating wheel, it is further explained, is supported between two steel beams, which can be raised or lowered to any depth within the machine's capacity. The rear end of the excavating wheel frame is supported by a post, to the lower end of which is fastened a shoe. The latter slides along the bottom of the finished trench, giving stability to the wheel also, because of its design, catching all crumbs and leaving the ditch and bottom in the shape of the tile.

Side cutters are bolted to the rims of the large wheel, which prevent the buckets sticking in the trench.

The machine excavates the full depth of the trench at one cut, leaving the bottom clean and exactly in grade. A level, sight-arm and flag-poles with sliding targets are provided with which the operator gets the desired grade by raising or lowering the cutting wheel. A curve can be cut to the right or left when desired.

The cost of operation varies according to the size of the machine used. A Buckeye cutting a ditch 11½ inches wide by 4½ feet deep, (this being the smallest Ditcher built) requires only two men, one operator and one helper, whose combined wages need not exceed $4 per day. About one-third of a ton of good soft coal, and one gallon of water for each pound of coal, are sufficient to run the machine ten hours. The manufactures guarantee any of their machines, when properly handled by a competent operator, to cut in soil that is favoranle at the rate of 3 lineal feet per minute, 3 feet deep, and greater or lesser depths in inverse ratio. It is claimed the Ditcher can average between 100 and 150 rods of trench per day, in good soil conditions.

In localities having a sticky "gumbo" soil, special open-back excavating buckets are used instead of the regular solid buckets for dry ground. When small stones are encountered, the machine excavates them along with the dirt. If the stones are too large to be carried in the buckets, the operator can close the throttle, reverse his engine, and jar the obstruction loose enough to be lifted out of the trench by hand.

Among other advantages claimed for this ditcher may be mentioned the following :

(1) That its use obviates the heavy expense and delay always incident to the employment of hand labor.

(2) Simplicity of operation enables

(Continued on page 654.)

Buckeye Traction Ditcher in Operation on the Government Farm, Truro, N. S.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee Keepers Association, and The New Brunswick Poultry Association.

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The Circulation of this issue is 9,000 Copies. Every one going to a bona fide subscriber.

JULY 26, 1910.

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August ..... 9—23
Sept..... .....6—20

SPECIALIZING ON BREEDS BY DISTRICTS.

Mr. Jas. McLay, a prominent figure at all our Maritime shows some years ago, when associated with the Chamcook Farm, St. Andrews, N. B., but now in charge of the Wyoming State sheep flock and assistant lecturer on animal husbandry at the Wyoming Experiment Station, accompanied by Prof. Faville, Chief of the Animal Husbandry Department of the said station, were in Sussex and other points in the Maritime Provinces last week, selecting some pure bred dairy cattle, of various breeds, some sheep and some swine for their station.

Mr. McLay's friends were all glad to see the genial Scot again. He still has a deep interest in the East and says, that although they might have procured stock nearer home, he believed they would be well repaid for going so far afield, as he was of the opinion that there was less disease among Maritime flocks and herds than among those further West. He has kept in close touch with the doings of our Maritime breeders and is quite conversant with the show yard winnings of the respective herds.

This is Prof. Faville's first visit to the Maritime Provinces and he was much impressed with what he saw. He says that if the farmers of Maritime Canada would specialize in breeding by sections, so that a purchaser could go to the district of A and there buy a carload of Holsteins or to district B for Jerseys or to district C for Ayrshires, without having to travel so much and entailing so much expense in getting a carload of any particular breed, as at present, buyers would be in the field nearly all the time, buying up, at profitable prices, all the surplus stock they could procure.

"A word to the wise is sufficient."

Come again, Bro. Faville.

THE OBJECT OF AGRICULTURAL SHOWS.

Exhibitions do more perhaps than anything else to impress upon everybody the importance and magnitude of agriculture.

They are the farmers' shows and it will do for the farmers to make them the best and make the best of them. It is one of the great advertising mediums for the farmer. It is where he puts his fine stock and produce before the public in their most attractive form. It is where the farmer can learn what the other man is producing, make his acquaintance and get pointers for his own good. Without these public competitive events, the live stock breeds would not be so rapidly improved. It keeps breeders alert for defects in their own and strong points in the other man's stock. It affords an opportunity to see, examine and buy good breeding stock, and to sell what he has for sale.

It is a duty the breeder owes himself, his herd, his country and his state to become an exhibitor at the fairs. There is no better advertising medium than that of being in the show ring at your county and provincial fair. Stock raisers and farmers in general, who have need of improved breeding animals, at once recognize quality, and they reoognize prominence in standing of the various herds just as well. The breeder, who desires to "get into the game," must necessarily place himself in position to get acquainted with the public and have the public know who he is and where he is located. The local fair affords one of the best means of securing this.

But aside from this, the exhibitions are great educational institutions in many ways. The farmer goes and learns a little of city ways. He has to see—unless he is blind—what the great world is doing with his products. He learns what the public demand, what sort of package is best. He learns all about the newest machinery and can compare many makes.

CANADA'S NEXT CENSUS POPULATION.

The next census of Canada will be taken under date of June 1st, 1911, and will embrace the subjects of population, mortality, agriculture, manufacturers, minerals, fisheries and dairy products.

Population will be recorded under the heads of residence and personal description; citizenship, nationality and religion; profession, occupation and trade or means of living; wage-earnings and insurance; education and language spoken, and infirmities.

Every person living on 1st June will be entered on the schedule of population by name, as member of a family, institution or household, together with place of habitation, sex, relationship to head of the family or household, and whether single, married, widowed, divorced or legally separated. The month of birth, year of birth and age at last birthday will also be recorded.

Entries will be made for each person to show the country or place of birth, year of immigration to Canada if born elsewhere, year of naturalization if formerly an alien, and also racial or tribal origin, nationality and religion. Every person of alien birth, who has become a naturalized citizen, is a Canadian by nationality; and every British subject with residence in Canada, as well as every native of Canada, who has acquired citizenship by birth or naturalization, is also a Canadian by nationality. But there is no Canadian by racial or tribal origin, unless the Indians are so counted.

Every person having an occupation or trade will be entered for it, but if employed in the census year at some other occupation for part or whole time, he will be so recorded also. If the person is working on own account, the entry will be so made. An entry is also required to be made showing where the person is employed, as on farm, woolen mill, at foundry shop, in drug store, etc.

Wage-earners are entered to show the number of weeks employed in 1910 at chief occupation or trade; at other than chief occupation if any; the hours of working time per week at chief occupation, or at other occupation if any; the total earnings in 1910 at chief occupation; the total earnings at other than chief occupation; and the rate per hour when employed by the hour.

Entries are required to be made for each person showing the amount of insurance held at date of the census upon life, as well as against accident or sickness, together with the cost of such insurance in the census year.

Under the heading of education and language records will be taken for every person of five years of age and over, showing the number of months at school in 1910, and if the person can read and write, and the language commonly spoken by each person. The cost of education in 1910 for persons over 16 years of age at College, Convent or University is also called for.

The last question on the schedule of population relates to infirmities. It calls for a record of each person having an infirmity. If blind, deaf and dumb, crazy or lunatic, idiotic or silly, a record thereof will be made in the proper column, and the age at which the infirmity appeared is required to be specified.

VALUE OF PASTURE LANDS.

There has never been a proper appreciation of the real worth of the pasture lands in this country. All lands were naturally pasture, or regarded so, and used as lands to turn stock onto for grazing or occupying as a pasture. This has been true since the first settlement of the country. Even the wild native timber lands and forests were looked upon and regarded as pastures by our forefathers.

It has always been the practice with the pioneer settler to select the smoothest land, the acres most readily turned to cultivation, as the farm land, the land to be cropped, leaving the rougher, poorer and least productive to be pastured. Pasture lands from the beginning of time have been discriminated against, as a kind of waste; tracts when not good enough for easy cultivation from any cause were good enough for pasture, be they rough, stony and hilly, or wet, boggy and swampy lands.

The farm pasture has usually been a piece of ground that made itself, so far as grass is conserned. It has been taken possession of naturally or voluntarily by the native grass and white clover grasses which follow the conditions of cultivation as well as weed crops and neglect of various sorts These pastures commense early in the spring to send forth their crops, and persistently continue until the late autumn season checks growth of vegitation. It must be observed that these refuse fields, and often untillable tracts' when spring opens up at once take the place of the winter feed, hay and grain, a very expensive proporation of feed that is prepaired on all farms at consiperable cost. They not only serve as a substitute, but they actually exceed all prepared feeds in conditioning and fleshing up the farm stock. The sick and enfeebled animals at once take on new vigor and life when turned on the spring pastures, thus demonstrating the superior value of the pasture grass over any other form of farm crop as a feed.

The time has now come when the pasture must be credited for what it is worth. Instead of leaving the pasture to catch and develop from year to year, it has become necessary to make pastures, and make them to produce two or three times the amount of feed that they formally supplied. Many farms do not contain any rough or untillable lands that are fit for nothing else than pasture—can not be put to other use. Such farms must have pastures, notwithstanding their good, even quality of lands. They can have much better pastures, producing much more grass, and it is the duty of the farmer to proceed in the cultivation of a pasture. This can be done by sowing a variety of pasture and hay grasses; as the sod thickens up the distinctly pasture grasses will take possession of the land.

The dairy business, for instance, is suffering today all over the country for need of more and better pastures. Pastures produce milk cheaper than do the prepared feeds, and there is nothing that will exceed good pasture in quantity and quality of milk. The cow owner that wants to get the greatest advantage out of his milk product should not neglect the making of first class pastures for his cows. The milk product during the grazing season is the cheapest produced through the year and most profitable for the dairymen.

Does Concentrated Food Pay in Milk Production.

Editor The Maritime Farmer .—

I, as a dairyman, enclose herewith a cutting from The Dairy World and would very much like to see the subject discussed in your columns. My own idea is that, here in Canada, it pays to feed concentrated feed to cows even in summer, when the pastures are at their best.

A. OWEN PRICE.

Annapolis County, N. S.

Following is the article refered to :

DOES CONCENTRATED FOOD PAY IN MILK PRODUCTION ?

The question of the economic value of concentrated food in the production of milk has lately been receiving the attention of practical dairymen, and judging by the remarks of Mr. Primrose McConnell in The Agricultural Gazette, it seems that the views hitherto generally held on this subject are likely to be considerably modified. No one speaks with greater authority on the practical side of dairying than Mr. McConnell, and his observations, therefore, are entitled to serious consideration. In the course of a letter to our esteemed contemporary, Mr. McConnell says:—

It may be assumed that all cows get fodder and roots as the bulk of their food—the fodder being hay and oat straw, and the roots being cabbage, turnips, swedes, kohl-rabi, and mangles; some or other of these according to the district and the nature of the farm. The problem is to find out what is the lowest amount of purchased, in feeding stuff that can be utilised to yield the greatest profit from the milk produced. It may be further assumed, of course, that the more concentrated food allowed, the less fodder and roots will be needed to keep a cow going, and therefore some manipulation of the quantities of each may be necessary to find out the happy medium.

The method to be adopted is to first find out the number of pounds daily of each item in the rations fed to the average cow in a herd in milk then value these at the market prices current in the locality; againtt this put the average daily milk yield per head, and thus arrive at the cost for food alone of producing a gallon of milk.

I give a ration below, taken from actual practice, to illustrate the method :—

	d.
10lb, hay	2.6
7lb. oat straw (chaffed)	1.6
28lb. mangles (pulped)	1.5
2lb. decorticated cotton cake..	1.7
2lb. sugar feed	1.1
	8.5

On this the average milk yield is 20.1 lb, or 1.96 gallons; the cost for food is therefore 4.3d. per gallon. Now, the question is, would it pay to increase any one of the above ingredients: the purchased food in the above amounts to 1s. 8d. per week; would it pay to increase this ? My own opinion is that it would not, as I showed in my former letter that reducing from 4s, 6d. per week to 2s. 6d. was followed by an increasing profit balance and a further profit by going still lower, and the point is to find the figure that would give the best results all round—the happy medium, as it were.

Last week, in one of your Scottish contemporaries, two farmers—writing independently—gave their results worked out: with one the cost is 3¼ d. per gallon, and with the other it is 5¼ d. Other things being equal it is manifest that the cheaper man is the one to follow, and it is on this line the inquiry should be made.

The whole world has been started by the milking tests inaugurated by the Highland Society under the management of the late Mr. John Speir. He found that some farmers were feeding their cows at double the expense per gallon of others, and on adjacent farms that some high-yielding herds were not paying so well as poorer-yielding ones not far off, and that there was very great need of investigating this point as one on which we were very ignorant, and in which there was room for valuable inquiry. The last time I met him (at the recent Smithfield Show) he was full of the great advances yet to be made in this direction, but he has not been spared to carry them out.

Since writing the above, the Journal of the B.D.F.A. has come to hand, in which Mr. Speir's last article on the subject appears, and those interested should get a copy. He shows that with cheese-making farms where the milk is produced on summer pastures only, the cost works out at from 1s. to 1s. 8d. per gallon of 10lb. For winter feeding the average was about 4.3d. over 600 cows for two years—that is, the winter cost 3d. per gallon more for food than the summer supply did. He further shows that the cost comes out pretty constant on pastures at both high and low rents, because the higher-rented land yielded the more milk per acre.

Some two or three months ago a friend of the writer reduced his allowance of cake and meal because of evidence similar to the above, and was surprised to find that his herd went up in yield some thirty gallons during the first week; their previous allowance had really been checking the flow of milk.

If any dairy farmer who reads these notes will work out his own figures, and compare them with those that are given above, or with those of his neighbors, he will get his eyes opened, as I have had mine. I am convinced that going back, say forty years, during my father's time and my own, we have thrown away thousands of pounds worth of feeding stuffs, which never left any profit either in milk or manure. The only consolation I have is that I am not the only bally fool in the country.

I have not come across, in recent years, a subject connected with dairying which gives so much promise of immediate cash profit as this, as the result of a little investigation. Finally, let it be clearly understood by half-informed persons that it is food cost only we are discussing, and not the total cost of production. The rent of the land, the cost of labour, depreciation, deaths, & c., are being left out of account for the time being, because this one item is the one we can most easily control, is the one which involves the greatest saving, and is also the one we seem to know the least about, although we have been feeding cows for generations.

Editor's Note.—Will dairymen who have had practical experience along this line send us their opinion on the question of feeding grain etc., to cows on pasture.

Important Appointments.

Some recently announced appointments are indicative of the growth and evolution of the Dominion Department of Agriculture. Messrs J. H. Grisdale, Agriculturist, and W. T. Macoun, Horticulturist, of the Central Experimental Farm have been given charge of the work in their respective branches at all the Dominion Experimental Farms. It is hoped that by having officers whose supervisory work in gardening, field husbandry and live stock will cover the whole system of Experimental Farms a greater degree of unity, efficiency and usefulness will be attained and the national value of the work increased.

The distribution of agricultural information in the form of bulletins and reports has become so important a phase of the work of the Department of Agriculture, that it has been decided to create a new branch having charge of publications in a systematic way. Mr. T. K. Doherty, for some years the capable private secretary to the Minister of Agriculture, is to be chief officer of the new branch with James B. Spencer, at present assistent in the Live-Stock branch as chief editor of publications. Mr. Spencer's extended experience in agricultural journalism fits him admirably for such a position.

The new branch will edit and distribute the information supplied by the Seed, Cold Storage, Live Stock, Agricultural Statistics, Markets and Pedigree Records Divisions and will also have charge of the work involved in the co-operation of the Dominion with the rest of the civilized world in the International Institute of Agriculture, which has its headquarters in Rome.

The transfer of Mr. Spencer to this new work and the resignation of Mr. Geo. H. Greig, Live Stock Commissioner for the West, have deprived Dr. Rutherford, Veterinary Director General and Live Stock Commissioner, of his chief assistants at a time, when the work of his branch of the service is rapidly growing. To make good this loss Prof. H. S. Arkell of Macdonald College has been appointed to the staff of the Live Stock Branch. His position has not been clearly defined to us, but we understand he is to have charge of the organization of the activities of the Department in the encouragement, extension and regulation of the live stock industry.

This appointment appears to us a particularly happy one. Prof. Arkell's thorough education including an Arts Course in McMaster University as well as an Agricultural Course at Guelph, his experience on the staffs of the Ohio State University, the Ontario Agricultural College and Macdonald College and his well-used opportunities of observing the methods of breeders in the British Isles, Holland and other of the older lands have given him a wealth of knowledge, and a breadth of outlook, which admirably fit him for such position as that to which he has been called.

Prof. Arkell's appointment to the Civil Service of course necessitated his resignation of the Chair of Animal Husbandry in Macdonald College Mr. H. Barton, Lecturer in Animal Husbandry, who has been Prof. Arkell's capable assistant ever since the opening of the College, has been granted a well-deserved promotion and is now Head of the Department of Animal Husbandry in the College.

The Corps and Live Stock of Canada.

The Census and Statistics Office today reports on the condition of field crops and the number and condition of farm animals of the Dominion at June 30. For the three years 1908-1910 the field crops range in condition from 82.16 for spring wheat to 91.42 for hay and clover this year to 80 for spring wheat and 82 for rye and peas in 1908. Fall wheat is 85.47 this year compared with 77.28 in 1909 and 89 in 1908. Oats was 90 in 1908 and 93.81 in 1909, and this year it is 86.29. Peas is 86.94 this year; last year it was 84.40 and in the previous year 82. The condition of mixed grains is nearly the same, being 84.53 this year, 86.58 last year and 84 in 1908. Hay and clover is better this year than in either of the previous years, being 91.42 compared with 76 in 1909 and 87 in 1908. The condition of alfalfa has been recorded this year for the first time, and its average is 88.94. Pasture has a condition of 89.02 this year, compared with 99 in 1908 and 87.74 last year. The conditions of all field crops are good in Ontario, the highest being 94.29 for fall wheat and the lowest 84.79 for spring wheat. Quebec crops range from 74.45 for mixed grains to 102.58 for hay and clover. Peas is 84.42 and its condition is the next above mixed grains. In Prince Edward Island and Nova Scotia all field crops are reported for a condition above 90 except alfalfa, which is 83.33 in the Island. Hay and clover are 104.31 in the Island and 185.79 in Nova Scotia. Wheat, oats, mixed grains and alfalfa are reported in a condition above 90 in New Brunswick, and all other crops between 83 and 89 except alfalfa, which is 97. Hay and clover are reported between 83 and 89 except alfalfa, which is 97. Hay and clover are reported at 109.68. Manitoba, Saskatchewan and Alberta have low averages throughout owing to a light rainfall in June. The general condition of crops in Manitoba is much below the average. Correspondents in nearly every district report no rains—only a few light showers and hot dry winds that absorbed the moisture and withered the crops. The lowest average condition is reported from around Brandon and Morden, and the highest from Marquette where it is placed at a standard. In Saskatchewan the crops do not appear to have suffered from climatic conditions to the same extent as in either Manitoba or Alberta, as there have been many local showers. The reports from Lloydminster, Battleford, Indian Head and Qu'Appelle are very favourable, the condition of wheat being placed at 100 and over. The prevailing condition of crops in that part of Alberta south of townships No. 30 is below the average in consequence of the drouth and hot winds. In the Edmonton district the grains, although suffering to some estent from the same causes, are in much better condition. The best reports come from the Strathcona district, and those from Athabaska Landing and Saddle Lake districts are also particularly favourable. The field crops of British Columbia are all good. The areas of late cereals—buckwheat, flax, corn for husking, beans, potatoes, turnips and other roots, sugar beets and corn for fodder—have increased this year to 2,150,382 acres, which is 279,526 acres more than last year and 247,869 acres more than in 1908. But this increase is altogether in flax, which owing to the high price offered for seed has come into favor with the farmers of the Northwest.

The only farm animals which show a noticeable increase since 1907 are horses, while sheep and swine have declined. The condition of all these animals over the Dominion exceeds 99.—Ottawa, July 12th.

Fencing the Farm.

Good fences very often indicate good farming. During the summer extra help is usually necessary for the weeding and haying. After the showers it would be more profitable to use this help at some other job until the ground dries up again. Fencing and preaaring for the fence is one of them. There are a few particular points to be observed.

1. Stave out the line with stakes about 6 feet long.

2. If there are too many trees

(Continued on page 652.)

HORTICULTURE

Store House for Apples.

In planning a storeroom for keeping apples through warm weather as well as cold weather, provision should be made for placing it as deep in the ground as practicable, and the floor should be concrete. The concrete floor gives the best condition of excess heat downward in the summer time, to keep the storeroom cool, and the conduction of deep ground heat upward in the winter to keep the storeroom from freezing. If no artificial heat is to be provided the ceiling should be of galvanized iron, nailed directly to the joists and the space between tae joists and the floor above filled with sawdust, dry peat or some such non-conductor. The advantage of the galvanized iron for ceiling is that it makes the ceiling absolutely air-tight and so prevent loss of heat in winter and it will not mould and so will protect the joists from decay. If the walls above ground were hollow and the space filled with sawdust or dry peat the storeroom would be cooler in warm weather and less liable to freeze in winter. Windows should be double. For ventilation use a nine-inch galvanized iron flue extending out through the roof from near the bottom of the cellar. Provide two six-inch galvanized iron intakes, built horizontally in the wall on opposite sides, with the ends projecting into the storeroom about six inches. Provide each of these and the out-take flue with dampers to regulate the air movemeot. Both intakes and outtakes should be kept closed except when the air is too damp or too warm in winter.—Rural New Yorker.

How to Prune and Why.

Aside from shaping the trees in the nursery, which is done before the trees are received for planting, pruning should begin at the time the trees are being set in the orchard. No systematic method of pruning can be recommended which will apply with equal success for all varities of apples and for all localities. Varieties differ in shape and in habit. Different soils and climatic condition necessitat different methods in different places. Even under similar conditions and with the same variety one man succeeds with one method, while another succeeds perhaps equally as well by adopting a different plan. There are, however, certain principals which should be borne in mind in determining how to prune.

Pruning as a whole should be regarded as a means of adapting the tree, or its individual branches, to environment or surroudings. In considering the environments, the climatic condition of the region is important. Apple trees should be pruned so as to give the maximum amount of sunlight to every limb. This is necessary to give sufficient sunlight for the proper development and the proper coloring ol the fruit. The head may be formed of five or six leading limbs, which spread out equi-distant from each other as scaffold limbs. This arrangement of the branches affords an open centre to admit sun and air. On hill or ridge land trees should be headed much lower than in the valley. This is to prevent the wind from blowing the tops about and destroying the fruit. Trees that are headed low protect the bodies from sunscald, the fruit is gathered and spraying is done with much less effort.

It is generally best to remove surplus limbs while they are young, rather than to leave them until they are large. The removal of very large limbs should bot be practised where it can be avoided. It exposes parts of the tree to the sun which have been accustomed to semi-shade, and also makes large wounds on the trunk. Diseases may get into these large wounds before they heal over. It should be borne in mind, however, that a limb may serve a very useful purpose for a year or two, and then it may be removed if no longer needed.

In removing limbs it is best to cut them very close, so as to leave no suggestion of a knot. The closer the cut the larger the wound will be, but a large wound made by cutting close will heal quicker than a small wound, which leaves the base of the removed branch.

One must depend upan the cambium of the trunk to grow over the wound where a limb is removed from the trunk. If a short knot is left it will die, and the growing layer of the trunk cannot close over it until the tree increases sufficiently in diameter to grow over the knot.

The most of our pruning is done during March, April and May. One can see better what limbs to remove while the trees have no leaves, though diseased and dead parts should be removed whenever they occur. They can be more readily obsererved when the tree is in leaf. Not that every tree in the orchard will need prunning. Ii a tree needs no pruning, do not cut simply for the sake of pruning. Some trees, however will need attention every y?ar. A will need attention every year. A than much pruning at long intervals. —H. Stabler in Farm and Home.

Remedies for some Common Troublesome Insects.

Cabbage Worm.—This is the green worm which works on cabbage and cauliflower, and which is produced from the eggs of the white butterfly. Use Paris green and arsenate of lead in water during the season as frequently as occasion demands on cabbage. Cauliflower cannot be sprayed after the heads begin to form. Dry hellebore, which is harmless to man, can be used on cauliflower heads if they are eaten by insects. Some growers use Paris green on cabbage as strong as three pounds in fifty gallons of water, since they seem to be resistent to injury. A quart of soft soap, or eight quarts of very strong soapsuds should be used in every fifty gallons to insure the liquid spreading over the leaf. Any liquid which contains Paris green should be kept, constantly stirred during the spraying to prevent the Paris green from settling to the bottom.

Currant Worm.—This greenish caterpillar frequently begins its work on the inside of the currant or gooseberry bush, gnd hence it is sometimes not noticed until it has nearly stripped the bush of its leaves. Keep a sharp lookout for them and upon their first appearance spray or sprinkle bushes with arsenate of lead (one pound in ten gallons of water), or Paris green (one pound in twenty-five pounds of air-slaked lime) used while fruit is small. Afterwards use white hellebore as a dry dust when leaves are wet with dew, or one ounce in one gallon of water sprayed or showered on with small broom.

The Lawn.

A pretty, well-kept lawn is one of the best assets a home can possibly have. It is often likened to the canvas a painter uses. Beautiful pictures may be made if one is careful in arranging the trees and shrubs on it. There is no reason for a poor lawn if it is carefully prepared and good seed is sown.

PREPARATION OF LAND.

The land should be deeply plowed pr spaded unless the subsoil is poor, then harrowed, and a good dressing of thoroughly rotted manure put on and disked or harrowed into the soil. All sticks, stones, etc., that would nterfere with the lawn mower should be removed, and the lawn smoothed and raked so that the land is fine and smooth.

SLOPE.

It is a good plan to have the lawn sloping rather than level. It is more pleasing to the eye and drains better than when flat. No steep slopes should be allowed anywhere if they can be prevented. It is difficult to run a lawn mower over them, and the grass is more apt to dry out.

SEEDING.

After the land has been smoothed and fined so that it is in good condition, the seed may be sown. Kentucky blue grass should be the principal seed in every lawn mixture, because it is a strong, rank growing grass and forms a heavy sod. Red top and white clover are added because they form a quick sod and soon give way to the blue grass. A good mixture consists of 3 bushels of Kentucky blue grass, 5 pounds solid red top, and 3 pounds of white clover per acre. If a very large quantity of seed is to be sown, it is better to mix one's own seed; otherwise, buy some good lawn mixture from a reliable seedsman. The seed should be sown evenly sometime when the wind is not blowing, and then immediately raked into the soil. The land should then be rolled to firm the soil about the seed. It is a good plan to water the lawn and keep it moist until the seed comes up. Great care should be used not to allow anything on the lawn until the grass is up and the the soil firm.

SOD.

Sodding is sometimes practiced, but is much more expensive, and while it secures a lawn a little quicker, is no better than seeded land. If not properly laid, sod often makes a rough, poor lawn. The sides of walks and drives may often be sodded to advantage.

TIME OF SOWING.

Early spring is the best time to sow a lawn as grass makes a better growth during the cool, moist weather of spring than later. July and August are usually too dry.

SEEDING BANKS,

Trouble is often experienced in getting grass to grow on a steep slope This is usually because the heavy rains wash the seed out before it becomes established. This may be prevented by running a heavy board along the top of the slope, to turn the water to some convenient place where a box culvert may carry the water over the edge of the slope until the sod is established. It is also a good plan to sow plenty of seed.

MOWING.

As soon as the grass is high enough it should be kept mowed with the lawn mower, as this makes a thicker, closer stand of grass. The clippings may remain on the ground if not too heavy, and protect the plants from drying out.

FOR SALE.

100,000 Apple trees, 75,000 Pears, Plum, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agente wanted on vacant territory, selling for fall and spring 1911 delivery.

THOS. W. BOWMAN & SON CO., LTD.
Ridgeville, Ont.

Sickness is usually caused by the accumulation of waste matter and impurities within the body.

Dr. Morse's Indian Root Pills,

enable the bowels, the kidneys, the lungs and the pores of the skin to throw off these impurities. Thus they prevent or cure disease. 12

25c. a box.

THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

SEALED TENDERS addressed to the undersigned, and endorsed "Tenders for supplying Coal for the Dominion Buildings," will be received until 4.00 P. M., on Tuesday, August 16 2910, for the supply of Coal for the Public Buildings throughout the Dominion.

Combined specifications and form of tender can be obtained on application to this office.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, equal two ten per cent (10 p. c.) of the amount of the tender, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
R. C. DESROCHERS,
Asst. Secretary.

Department of Public Works,
Ottawa, July 6, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

THE WORLD LOOKS DARK

To the Dyspeptic. How to Make It Bright.

Father Morriscy, the learned priest-physician, realized that many of the difficulties and troubles of this world are due to indigestion. He believed that to get a proper mental and spiritual attitude, a normal digestive apparatus is very helpful. The good Father therefore gave much study to the important question of the stomach.

His famous prescription, "No. 11," for dyspepsia and indigestion, consists of simple tablets cleverly compounded from the materials in Nature's laboratory. Each tablet will perfectly digest a full meal of 1¾ pounds of food.

Father Morriscy's "No. 11" has brought ease and continued health to thousands of sufferers who had previously tried other remedies in vain. It instantly relieves and in due time restores the stomach to full vigor.

If you suffer at times or regularly from a sick, sour, dyspeptic stomach, try No. 11, and see how quickly you can again enjoy hearty meals, and how bright the world looks once more.

In convenient flat boxes at 50c. each. Get a box from your dealer, or from Father Morriscy Medicine Co., Ltd., Chatham, N.B. 91

F. C. WESLEY CO.

ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street,

St. John, N. B.

Fruit Growers

DO you want other fruit growers to tell you how

NICO SOAP AND PREPARED BORDEAUX MIXTURE

helped them to turn insect destruction into profitable production?

Bordeaux Mixture is a fungicide and Nico Soap in an absolutely sure death to sucking insects. Information will be sent you if you send your address to

BLACKIE BROS., Halifax, N. S.

Agents for the Deming Spray Pump—Send for catalogue.

Co-Operative Fruit Shippers, Association.

A meeting of the Co-operative Fruit Shippers' Association of the Annaphlis Valley was held at Foresters' Hall, Berwick on July 4th. It was attended by delegates from the ten co-operative fruit packing associations in the Valley. The association at Bear River was nor represented.

At the business meeting at 11 o'clock Mr. A. E. McMahon was chosen vice-president, Mr. J. N. Chute, secretary. Mr. S. B. Chute was afterwards elected general manager.

A public meeting opened at 1.30. Mr. S. C. Parker gave an address on the benefits of co-operation, in which he pointed out the financial advantages already obtained in the way of larger prices for fruit better packed as a result of the adoption of the co-operative system. The system was leading to the growing of better fruit as the example and methods of the more careful, painstaking and successful growers would be followed by others, as the benefit resulting from these methods became more patent.

Mr. F. M. Chute urged the adoption of a uniform system of book-bookeeping. He outlined the system now followed, showing the necessity of a uniform system which would facilitate the work of auditors and under which each lot of apples could be traced by entries, from its receipt at the packing house till placed on the car for shipment.

After an interesting discussion upon the subject a committee consisting of Messrs. John N. Chute, Foster M. Chute and Avard L. Harlow, was named to devise a satisfactory and effective system.

Mr. McMahon spoke briefly in regard to aid required by fruit growers from the government. There was a general feeling that too large a share of the receipts for the sale of our fruit in the English market was absorbed by the commission on the other side. He suggested the appointment by the government of a man who could look after the apples in the foreign market.

Mr. F. M. Chute gave some figures obtained by him during his visit to England in January, 1909, showing where very considerable saving could be effected in the marketing of our apples.

Principal Cumming, of the College of Agriculture, suggested that government aid might better take the form of a grant to the Fruit Shippers' Association to be expended in the payment of the salary of a man employed for the purpose stated.

Mr. McMahon, Mr. S. E. Bancroft, and Mr. John Donaldson were appointed a committee to interview the government upon the matter and also in regard to the appointment of inspectors, whose duty it should be to secure uniformity in grading and packing.

Principal Cumming was called on for an address. After assuring the meeting that he had nothing to say in regard to the specific objects of the association, he intimated that a few words regarding the new ditching machine might be the means of answering some questions that would otherwise have to be answered repeatedly. He was able to give the gratifying assurance that the machine was a success. It was now working in Annapolis County. The charge for digging and grading in readiness for tile was twenty cents per rod. It would cut a ditch to a depth of more than five feet. It had been at work for the farmers of Stewiacke and was going back there from this Valley.—B. R.

Red Rose Tea is so popular because "it's good tea" and because when you buy a package you have the comfortable feeling you're getting an article fully worth every cent you pay for it. 62

Prices: 30c., 35c., 40c., 50c. and 60c.

MOLASSINE MEAL

The Unique Food for All Stock.

Have you tried the

MOLASSINE DOG CAKES?

Marvellous effects on Dogs. Keeps them healthy, free from worms, and their skins in fine condition.

—SOLE IMPORTER—

Andrew Watson,

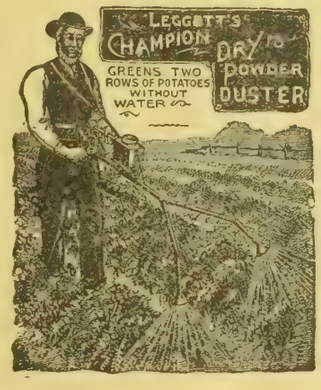
91 Youville Square, - MONTREAL.

NOTHING BETTER ON THE MARKET.

Will green two rows of Potatoes at once, as fast as a man walks.

Adjustable to any width of row.

Wide or narrow planting.



In general use many years.

Thousands sold annually.

The length of the Champion is such that the poison is kept a safe distance from the operator.

ILLSLEY & HARVEY CO., LTD,

Port Williams, - Nova Scotia.

General Agents.

Dust Spraying.

Dust spraying, or dusting says Prof. H. A. Surface, was at one time strongly advocated because it could be done more quickly than liquid spraying, and with much less waste of material; but it has been found that to be effective it must be done only when the leaves are damp as after a rain or dew. Moreover, it should be repeated five or six times to be as efficient as one good liquid spraying. Those who have been practising dusting have given it up; and even in Missouri, where it was most extensively advertised and recommended, there have recently been a series of experiments performed, showing that it is not so reliable as liquid spraying and is no longer recommended.

When the stomach fails to perform its functions, the bowels become deranged, the liver and the kidneys gested causing numerous diseases. The stomach and liver must be restored to a healthy condition and Chamberlain's Stomach and Liver Tablets can be depended upon to do it. Easy to take and most effective. Sold by all dealers.

Farmers Do Exceptionally Well

——As Agents for the——

Empire Cream Separators

1st.—Because no selling experience is necessary.

2nd.—Because one farmer understands the other.

3rd.—Because the Empire Cream Separator is the easiest to clean, easiest to turn and easiest to sell.

4th.—Because selling separators can be done at odd times without neglecting farm work.

5th.—Because the makers of Empire Cream Separators stand behind every machine.

6th.—Because there is no fault-finding after machine has been placed.

Write us to-day for further particulars.

The Empire Cream Separator Compnny of Canada,

Sussex, - - N. B.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Proper Watering of Milking Cows.

The dairyman should remember that his milk cows need water frequentl y during these hot summer days, just as a man does best if he drinks a few sups of water occasionally, before he gets very thirsty rather than great sluices once or twice a day. A cow requires water often to properly digest the food she eats so it is better to give it to her frequently than in large quantities once or twice a day.

If the pasture is provided with a stream of clear water running through it, or a wind mill and well, the cows will of course take care of the water problem to suit themselves and if you watch them you will see them drinking several times a day. If there is no stream or wind mill, and the well or spring is not in the pasture, try the followng plan of watering them, and watch the milk returns and see if the labor involved is not well paid for:

Take a number of half-barrels and place them at convenient spots in the pasture, sinking them into the ground six or eight inches, under trees if there is such shade. If there are no trees then build on the sunny side of each barrel a lean-to shed to make a shade, high enough to permit the cows to come under and drink. Twice or three times a day, according to the size of your herd, fill a barrel or two with water from your well or spring, place them on a wagon and fill up the pasture barrels. See that the barrels are kept clean, and do not allow the water in any of them to remain long enough to become stagnant.

This makes a little extra work, but if you have no running water in your pasture you will find it better to do this than watering your cows once or twice a day. You will get good returns for the extra work in the increased quantity of milk, and in the contented, placid disposition of your cows. Try it a while and you will note a decided improvement. If possible, it is more important that milk cows have plenty of pure drinking water, and just when they want it, than any other class of stock.

Influences of Feeding Potatoes on test of Milk.

A reasonable test for buttermilk at a creamery is .2 per cent fat. I am unable to say what the average test of buttermilk is in this state but I think it does not vary far from this figure in creameries. In some places cream is churned so exhaustively that buttermilk tests down to .1 per cent and I presume it even goes so high as .3 per cent but an average of .2 per cent fat in buttermilk is a fair figure for creamery work.

I do not think that the feeding of potatoes to cows lessens the cream test. If potatoes are fed in small quantities when cows are on dry feed I think they may have a tendency to increase the flow of milk and this may temporarily reduce the test of milk but it will not be permanent.

The test of cream, however, is a matter which is entirely independent of the milk test, if the milk is skimmed by a cream separator as these machines are so constructed that the richness of the cream can be regulated regardless of the richness of the milk skimmed.

E. H. FARRINGTON.
Wisconsin Dairy School.

Close Skimming and Churning.

Emil Holm, of the Royal Experiment Laboratory, Copenhagen, has a thoughtful article in Maelveri Tidende on the value of the chemical analyses of skimmilk and buttermilk.

After acknowledging the value of using te fat percentage of the dry matter in buttermilk, in determining the closeness of churning, he says: "It is my opinion that the closeness of skimming and churning is not enough by itself, more is needed!

"We all agree that the aim of a creamery should be to work so that the least amount of fat is returned in the skimmilk and the buttermilk for every 1,000 lbs. of whole milk. The amount of butterfat in the skimmed milk is the product of the fat percentage and the amount of milk. It then depends not only on the fact percentage, but on the amount of milk as well.

"When thus two creameries skim equally close, as for instance 0.1, but one takes 18 per cent. and the other only 12 per cent. cream, they return for every 1,000 lbs of whole milk treated respectively 0.82 and 0.88 lbs. of butterfat in the skimmed milk. Hence the necessity of not only knowing the analysis but also the weight of the milk.

"It would, however, be premature to conclude from the above example that the first creamery works more economically than the second—the buttermilk must also be considered. Assuming that the whole milk is equally rich at both creameries and assuming that the yield is 4 per cent. butter, and we may here be allowed to leave out the question of the amount of starter and rinsing water used. We then get 140 lbs. buttermilk at the first creamery but only 80 lbs at the second, so that the probabilities are that after all, the latter creamery works more economically. At least it is indicated by some experiments made some years ago by the writer and two creameries where one-half pound more milk was used for one pound of butter when 15 to 16 per cent. was taken as cream than when only 11 to 12 per cent. was taken.

"Hence, if we are to compare results at several creameries as regard the work done, it should be done by comparing the amount of butterfat returned to the patrons for every 1,000 pounds of whole milk.

The Real Canadian Girl

will never waste her money on imported table salt.

She knows that right here in Canada, we have the best table salt in the world—

Windsor Table Salt

The real Canadian girl, and her mother and grandmother too, know that Windsor Salt is unequalled for purity, flavor and brilliant, sparkling appearance 1

WINDSOR TABLE SALT

KEEP MILK SWEET!

It is important to thoroughly cleanse pans, separators and other utensils with hot water. The microbe that sours milk is inaffected by hot water.

ASEPTO SOAP POWDER

in the water will thoroughly destroy germs We guarantee it to be antiseptic, and it is as cheap as soap.

Sold in 5c Packages by ALL DEALERS

ASEPTO SOAP POWDER SWEETENS THE HOME.

Asepto Manufacturing Co.

St. John, - - N. B.

They Fear Your Common Sense

You are right to use common sense in buying a cream separator. Common sense says "The greater the skimming force, the faster and cleaner the skimming—The fewer the parts, the more durable and easy to clean." You have reason to feel indignant when agents for common, complicated cream separators, who fear your common sense, try to hide these plain facts by belittling your judgment. These agents cannot hope to sell their common machines if they admit these facts, for they cannot admit them without confessing that

Sharples Dairy Tubular Cream Separators

are the best. Tubulars contain neither disks nor other contraptions, yet produce twice the skimming force, skim faster, skim twice as clean, wear longer and wash several times easier than common separators.

The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. Write for Catalog No. 194

Light, simple Dairy Tubular bowl compared to common bowls.

Sharples 30 Yrs

THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

"While we surely agree as to the above theoretical side of the question, it may be more difficult when we come to the practical side which I do not claim to master. It requires exact analysis and fairly correct statements of the amount of new milk, skimmilk and buttermilk.

"As regards the chemical analysis we have now in the 'shaking out method' (Gottlieb-Roese method) a reliable determination of the fat so that if special care is taken, excellent results are obtained.

The author then tells about some tests made in 10 creameries to which he sent blanks, with columns for "name of creamery, speed of separators, temperature of milk, feed of milk per hour, pounds of new milk, pounds of skimmed milk, cream cooled to — degrees, churning commenced at — degrees, churning closed at — degrees, — pounds of buttermilk. (The weight of the skimmed milk was given as the difference between that of the whole milk and the cream and the weight of buttermilk as that of the cream plus starter and rinsing water less the butter yield, the buttermilk samples were taken the day after separated milk samples to make them correspond).

The blank had furthermore columns per cent. fat in buttermilk, per cent for three tests of fat in skim milk, dry matter in buttermilk, per cent fat in dry matter of buttermilk, pounds of butterfat in skim milk, pounds of butterfat in buttermilk, total pounds in buttermilk and skim pounds of butterfat lost per 1,000 pounds of whole milk, in skim milk, in buttermilk and in all.

It is hardly worth while to reproduce the table for the ten creameries from Nov. 13 to 16th, 1909, suffice it to state that the total loss of butterfat in skimmilk and buttermilk varied from 1.08 pounds to 1.70 lbs., for every 1,000 pounds of whole milk, or an average of 1,342 pounds.

The table does not show the average per. cent of fat in the whole milk, but if we assume it to be 3.8 per cent. the average loss of fat on the 38 pounds (per 1,000 pounds of whole milk) was 3.53 per cent. (from 2.84 per cent, to 4.47 per cent.)

This article should be read and digested by all buyers of separators who are often flim-flammed by agents with a test of the skim milk without reference to the amount of cream taken.—New York Produce Review.

How Milk is Produced.

"Most persons think that giving down or holding up the milk by the cow is a voluntary act," says John Burroughs, the well-known naturalist. "In fact, they fancy that the udder is a vessel filled with milk, and that the cow releases or withholds it just as she chooses. But the udder is a manufactory; it is filled with blood from which the milk is manufactured while you milk. This process is controlled by the cow's nervous system; when she is excited, or in any way disturbed, as by a stranger, or by taking away her calf, or by any other cause, the process is arrested, and the milk will not flow. The nervous energy goes elsewhere. The whole process is as involuntary as is digestion in man, and is disturbed or arrested in about the same way."

Cost of Raising Calves.

We do not believe that one farmer in a thousand really knows what it costs to raise a heifer calf to one year old. If they do not know they are very likely to sell the animal for less than she has cost them.

The Michigan Experiment Station made a special study of 57 calves raised to one year old.

The following amount of food was consumed per calf:

	pounds
Whole milk	405.4
Skimmilk	3967.7
Silage	1056.8
Hay	1007.0
Roots	148.6
Green feed	148.2
Beet pulp	111.4
Grain	1033.1

The food cost per calf of the above ration was $27.59 per head. Possibly some farmers may raise calves cheaper than the above, but remember that there is no labor cost charged here.

Now the real economic lesson to be learned from this is to raise nothing but what it will pay to raise. Put good dairy blood into your calves. Don't raise cheap, scrub stock for you cannot possibly sell them for what they cost to raise.

The difference in price between a good one-year-old grade heifer, sired by a pure bred bull, and a common native is fully $15.

So it pays to keep a registered sire to bred such calves from.

In the foregoing problem it should be considered that the prices charged for the food, will leave the farmer a good profit in producint it. The calf is to be considered the final market.

The Common Fly in the Dairy,

The common fly is an unmitigated nuisance. It can be said of many insects, that, unpleasant as they may be in many respects, they serve some useful purpose; for instance, a naturalist has recently raised a protest against the wholesale destruction of wasps, and has based his plea on the assumption that they destroy a large number of smaller insects, and especially of aphis. In a garden he had observed how a number of wasps checked an attack of aphis on fruit trees, and he suggests that the preservation of wasps in Kent would probably be attended with good results. But who has a favourable word for the fly? It breeds in manure and decaying matter, and its habits are far from clean. Its presence in large numbers may be taken to indicate that there is an accumulation of some sort of dirt in the proximity It will crawl over a mass of filth and then walk over a dish of food or take a stroll over a bald head, leaving behind traces of contamination. In this way disease is spread, and the bacillus of typhoid has been found in the dirt carried by flies.

As an instance of the numbers of bacteria the common fly can carry, the following figures given by Professor Easton may be cited :—

He caught 100 flies in a kitchen, put them in a pint of sterilised water and rinsed them about, and then examined the water, and found that he has raised such a number of bacteria off that each fly averaged over 300,000. He next caught a similar number in the cow barn, and they averaged over 800,000 each, another 100 in the pig pen, and they averaged over 1,000,000 each, a fourth hundred were caught about the swill-pails, and they ran up to 1,500,000 bacteria apiece. Do you wander that some of us object to seeing flies in the milk-jug? It may be said that when one goes into a factory or a house and finds many flies, one is immediately justified in condemning the sanitary surroundings of such premises. One, too, can appreciate the fact that in factories where flies abound it is next to impossible to keep them out of the milk, and the seeding of the milk by the bacteria which they carry must be very appreciable. The evil deeds of the fly need emphasising as too many of us seem to think the fly a necessary, if annoy,ng, nuisance; but truth is, the fly serves no good purpose or serves a purpose which can be better performed in other ways.

Magnet Cream Separator "Sanitary Strainer"

For STRAINING MILK. Patent No. 123484.

PRICE $1.00 COMPLETE.

Fits the MAGNET Tank or any pail of same size.

All milk strainers have failed to meet the requirements of Dairy Authorities except the cloth strainer, which can be washed clean.

The difficulty of holding the cloth on the top of the pail or tank has prevented the general adoption of the cloth strainer for the cream separator.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT STEADY AS A ROCK

By a simple spring device (MAGNET PATENT), which circles the top of the tank and holds the cloth in position, this difficulty is overcome and the milk strained directly into the tank.

The advantages are :—

1st, Great convenience in straining the milk.

2nd It retains the animal heat thus enabling more complete separation of butter fat from the milk.

3rd. Prevents dust or foreign matter from falling into the tank.

4th, Nothing to wash except the cloth.

5th. Time and labor saved. Adjust the spring over the cloth, holding it tight around the top of the tank, that is all.

6th. The only "Sanitary" Strainer known.

7th. It is simple, clean and will not wear out.

8th. The same MAGNET quality to the strainer as in the Cream Separator.

9th. Every MAGNET Tank should have one fitted on.

Fill in the coupon with name and address, enclose **one dollar** and strainer will be sent you prepaid. Money refunded if you do not find it the handiest article in your dairy.

Please send a MAGNET "SANITARY STRAINER," charges paid,

Enclosed please find $1.00 stamps of postal order. To ..... P. O ..... Province

The Petrie Manufacturing Co., Limited

Vancouver, Calgary, Winnipeg, Hamilton, Montreal, St. John.

Dairy Notes.

Allow nothing to go half done; neglect in any part of the dairy work is sure to make itself manifest in the quality and price of the product.

Never use a milking tube if it can be possibly be avoided as there is much danger of infecting the entire quarter by the use of the tube.

Oh, yes, a good dairy cow will soon produce her own weight in milk. One Holstein cow in New York state recently gave considerably more than a ton and a half of milk in 30 days.

The most economical dairying can never be practiced without a cream separator. Fat left in skim-milk is too expensive a food for calves and pigs. Butter fat is worth to you just what you can sell ir for in the market, and if you are feeding it by leaving it in the skim-milk, it is almost the same as buying butter on the market and feeding it. No intelligent man would do that.

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING. ARGYLE ST.,

Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application TELEPHONE 1005

The world's most successful medicine for bowel complaints is Chamberlain's Colic, Cholera and Diarrhoea Remedy. It has relieved more pain and suffering, and saved more lives than any other medicine in use. Invaluable for children and adults. Sold by all dealers.

LIVE STOCK.

Live Stock Pure Bred Sires as an In vestment.

It is evident to a student of Holstein-Friesian official reports that by the use of well bred sires and developed dams, Holstein.Friesian breeders are producing animals of greater capacity as well as acquiring greater skill in the development of that capacity; also that the improvement is but slightly dependent on an increased percentage of fat in the milk, resulting almost entirely from increased milk production. I note that increase in milk is the object of most farmer dairymen in introducing Holstein-Friesian blood into their herds, but sometimes they go at it in a queer and discouraging way.

A man who reads these reports as published in the dairy press writes me about a neighbor of his that is working into Holstein-Friesian cattle by using a fine-looking half-blood bull, nearly half of his calves being black and white, and who intends to use a pure-bred bull as soon as they become a little cheaper. Such a man in his efforts to improve his herd, is doomed to failure, for he has started wrong; and because Holstein-Friesian blood, even in small quantity, is apt to effect color, he will be apt to hold that breed responsible for his ill success. As he does not read dairy papers, he will never stop to think that the progency of a half-blood bull carry but one-fourth the blood he desires, and that the one-fourth cannot offset the preponderating influence of the other three-fourths. He will never learn that the only really good point that his grade bull possesses is the point where the butcher's pole axe should hit him, when he is led to execution.

As such men cannot be reached through the dairy press, Holstein-Friesian breeders should do missionary work when meeting them at the creamery, the condensary or the shipping station. Point out the benefits, and urge them to sunscribe for a good dairy paper; for if you can only get them to reading and thinking, you will find it easy to sell them pure-bred bulls. The question is not so much as to whether they can afford a pure-bred bull as it is as to whether they can afford to do without one, moving along in the old way, and using a scrub or grade. Offer to sell such a man one of the old-fashioned narrow width tools, be it a plow, harrow, drill, mower, rake or any other, and he will quickly tell you that he is not farming for his health, and that he cannot afford to have high priced help on high priced land monkeying time away with such narrow gauged tools. By reading a good dairy paper he will soon apply the same logic to the waste of time resulting from the use of narrow gauge cows.

Suppose that a man pays out $100 for a pure-bred Holstein-Friesian bull and raises but 10 of his heifer calves Suppose that each of these calves on coming imto profit yields but one pound more of milk at each milking than did her dam at the same age, an amount too small to be noticeable without weighing; yet it would amount to 600 lbs for the 600 milkings of the year, and have an average value of not less than $7.50, or $75.00 a year gain for the 10 heifers. But the average milking period for a cow is fully six years. which would bring a total gain to $450.00 for the 10 head. In actual practice, a bull, especially when used by neighbors, begets several times 10 daughters, and the individual gain in production of the daughters over their dams is much greater; so that instead of the $100 outlay being contrasted with $450.00 gain, the gain is more apt to be much over $1,000. What other investment could show such a percentage of profit ?—M. H. Gardner.

Fat Lamb Raising Experiments.

The New South Wales Government Experiment Station has been making extensive experiments, with a view to establishing the best cross for fat lamb raising. The director in charge of the experiments has decided in favor of the Shropshire-Lincoln-Merino cross. The Dorset-Merino and the Leicester have made splendid showings, but the final decision was made in favor of the Shropshire-Lincoln cross. The following table shows the records of the different crosses :

——Breed——	Weeks Age	Av'ge. lbs. Weight
Hampshire Lincoln Merino	10	51
Border Leicester Merino ..	11	50
Border Leicester Lincoln Merino...	11	56
Lincoln Merino	11	52
Dorset Lincoln Merino...	12	65
Shropshire Merino	12	49
Shropshire Lincoln Merino	12	62
Shropshire Border Leicester Merino	21	59
Dorset Leicester Merino	12	60
Dorset Merino	12	57
Suffolk Lincoln Merino .	13	59
Suffolk Merino	13	53
Hampshire Lin., Merino	16	86¾
Border Leicester Merino	17	83
Lincoln Merino	17	79¾
Border Leicester Lincoln Merino	17	90½
Dorset Lincoln Merino	18	96
Shropshire Lincoln Merino	18	96½
Shropshire Border Leicester Merino	18	95
Dorset Leicester Merino ...	18	97¾
Dorset Merino	18	78¾
Suffolk Merino	19	87
Suffolk Lincoln Merino...	19	90½

Sheep are increasing so rapidly in Queensland, Australia, that the question is raised as to whether the number of sheep in that colony "has not reached the limit of safety," as the correspondent of the Sydney Mail puts it. In 1890 the number reached 18,000,000, but was reduced so 10,340,000, during the next ten years, and in 1902 the flocks numbered only 7,213,000. Since that year the expansion has gone on at the rate of 1,500,000 per annum until close to 17,000,000 were numbered at the end of 1907, and now it is quite probable that the flocks of Queensland are in excess of the number in 1890. The flock masters have retained practically all their ewes since 1901, hence the great addition to the flocks.—Sheep Breeder

Culling the Ewes.

Every farmer who keeps sheep should keep some of the best of his ewe lambs every year to replace the older or poorer ewes in his flock. This is a generally appreciated fact among sheep owners, and is the usual practice upon most farms where sheep are kept. The picking of these lambs, while an important task which calls for good judgment on the part of the flock owner, is not more important than the selection of the ewes which are to be discarded. This is true because of the fact that the lambs selected are likely to be from the deepest milking ewes, since these are the lambs that will make the most rapid growth from birth to weaning time and, having the best start are like to develop most rapidly throughout the season. So in the selection of these lambs the most important consideration is that they are of the right type and uniform in this respect as well as in size and general quality. Most farmers do not pay enough attention to the question of uniformity of type in selecting ewe lambs to keep, basing their judgment of the individual more on size and thrift. These are excellent qualities and should, of course, be present to a marked degree in every animal selected, but uniformity is an equally important factor, even where the sheep are raised for market purposes only. The man who has a uniform bunch of lambs will always get a better price for them for this reason, whether they are sold to feeder or shipper, and it costs no more to produce this kind. But uniformity in the lamb crop can be secured only by selecting the ewes from which they are bred with an eye to uniformity and then breeding them to a pure-bred ram with a prepotency backed up by generations of uniform ancestors.

But the season for selecting these future breeding ewes has not yet arrived and it is the culling of the flock which it is essential to call to the flock owner's attention at this time. If this important work is altogether neglected until the time comes for reducing the flock serious errors are likely to be made which might be avoided by a little attention to the problem at this time. Quite often the condition of the ewes is made the guide for their disposition when the time comes for culling-out the flock. Where this the case it is likely to be the deepest milking ewes which are discarded, especially if the pasture has been short during the midsummer and early fall season. In such cases the ewes which became reduced in flesh through the feeding of one or two lusty lambs have not recuperated and do not look as well as the ewes which did not provide their lambs with as much nourishment, but have laid a good layer of flesh on their backs. Thus the very best ewes in the flock may be sacrificed to make room for those of better appearance, but which do not compare favorably with them from the standpoint of profitable production. But if the owner keeps watch of the flock at this season of the year and marks the ewes which have poor, scrawny

Bad Blood Means Bad Health.

BURDOCK BLOOD BITTERS

Makes Good Blood and Good Blood Means Good Health.

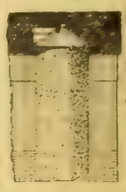
Mrs. Fred Bigge, Kingston, Ont., writes:—"I was completely run down, my blood was out of order, and I used to get so weak I would be compelled to stay in bed for weeks at a time. I could not eat, and was pale and thin everyone thought I was going into Consumption. I tried everything, and different doctors, until a friend advised me to use Burdock Blood Bitters.

"I did not have one bottle used when my appetite began to improve.

"I used six bottles.

"I gained ten pounds in two weeks. When I began to take it I only weighed ninety-three pounds. It just seemed to pull me from the grave as I never expected to be strong again. I will tell every sufferer of your wonderful remedy."

Burdock Blood Bitters is manufactured only by the T. Milburn Co., Limited, Toronto, Ont. See that their signature appears on every bottle.



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OXYGEN SPELLS LIFE

Are you ill ? Have you loved ones in pain ? If so **read carefully** this **announcement.** Magnificent **Oxygen Parlors** have been opened in **St. John, N. B., Suit 20, J. M. Robinson & Sons' Building,** (Tel. Main 2367), where **all curable diseases** are **cured** by **Oxygen.** No drugs, surgery, massage or electricity used. Just Oxygen and nothing but Oxygen. Fourteen years of successful record. The Oxygenators last for life. Can be used by man, woman or child. Cost only **$25 and $35.** May be **rented** if desired.

A great many people in the Maritime Provinces are the **proud owners** of these wonderful machines.

Full particulars given if you send name and address.

It will pay you to come in and see us. If not write **Lady Attendant.** Elevator takes you to the office.

Maritime Oxygenator Co.

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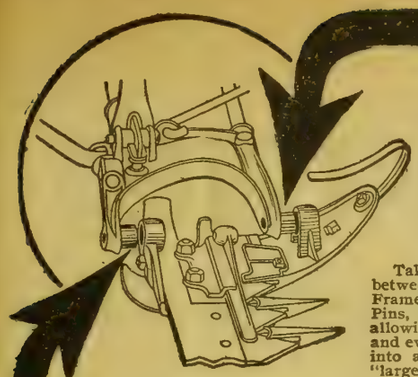
ST. JOHN, . . . N. B.



A Strong, Stay-Tight Connection Where Other Mowers are Weak

Seventy years' experience, plus a disposition to use the very best materials when it might seem more profitable to cheapen things, is why Frost & Wood Implements excel from the "Quality" standpoint.

Take, for instance, the connection between the Cutter Bar and Main Frame of a Mower. Others use Small Pins, that wear quickly, thereby allowing connection to work loose, and eventually "bang" the machine into a blacksmith shop. We use "large" Bearings for our "stay-tight" connection (see illustration). They fit accurately and there is no opportunity for wear, because Cutter Bar has no chance to work loose from Main Frame. No time lost on the field—no bills to foot.

Another example of Frost & Wood "Quality" is the Pitman Connection of Forged Steel and "the Ball and Socket Joint"—strongest, firmest connection on the market.

Roller Bearings, with heavy boxes to maintain them in perfect position, make the No. 8 run easier than others. Every connection is neat and accurate. The "Internal Gear" cuts out the necessity of a "flying start"—knives commence cutting with first forward step of horses.

The No. 8 Mower and its companion, the Tiger Rake, are on the top-most rung of the "Quality" ladder.

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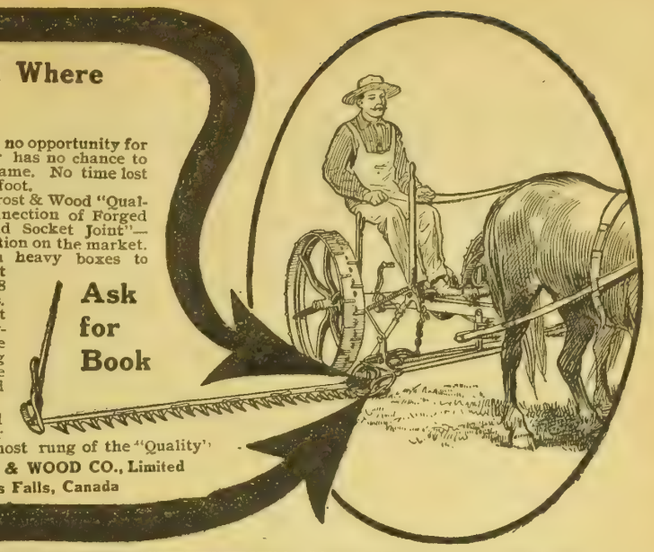

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I was Cured of Bronchitis and Asthma by MINARD'S LINIMENT.
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Lot 5, P. E. I.
I was Cured of a severe attack of Rheumatism by MINARD'S LINIMENT.
Mahone Bay. JOHN MADER.

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JOSHUA WYNACHT.
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PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

lambs, in some manner so that they may be easily recognized when the time comes for culling the flock this danger may be minimized. Of course in some instances there may be reasons for this other than the poor milking qualities of the ewes, but this is the season of the year to judge of that point, and there is no question but that the time spent in sizing up the flock in this manner will be well repaid in the future quality of the ewe flock and the market value of future lamb crops bred on the farm.

Of course, there are other factors entering into the selection of the ewes to be discarded. One of the most important of these is age. There is too strong a tendency on the part of flock owners to make the age of the ewe the important consideration in determining whether she should be retained in the flock or discarded in favor of a younger animal. Within certain limits the age of the ewe is an important consideration. The younger ewes will shear better fleeces and will add to the appearance of the flock somewhat and other things being equal, they should of course, be given the preference. But it is a mistake to discard the middle-aged ewe that has given abundant evidence of her value as a producer for one whose powers in this direction are unknown because untried.—**Michigan Farmer.**

Live Stock Dipping Sheep.

Sheep are dipped to rid them of external parasites and the scab mites.

Lime and sulphur dips are injurious to the wool, because of the caustic effect they have. Tobacco and arsenic dips are poisonous, both to sheep and man and must be used with great care. "Coal tar" dips are considered among the best by experienced sheep men, because they are effective, non- poisonous and do not ordinarily injure the wool.

All dips should be tested. Mix one teaspoonful to 50 or 75 of water as per directions. After loosely wrapping a few ticks or bed bugs in a very thin gauze, dip them into the mixture for thirty seconds, then remove and place under a tumbler. If all are dead in six hours, the mixture is strong enough. If not, make the solution stronger until thirty seconds in the dip is effective. In dipping sheep, keep them in the dip for one minute.

To mix, place the dip in the tank first, then add water; otherwise it does not always mix with uniformity.

Dip just after shearing, then little dip is lost. Results are better if dipping is deferred until wool is one-fourth to one-half inch long, as more dip will be held in the fleece. If ticks are present at shearing, the entire flock should be dipped at once before ticks get to the lambs. Repeat the dipping in ten days to kill any excaped or newly hatched insects.

After dipping, remove sheep from the sheds and yards in which they were kept. Then any loose ticks or lice cannot get back yo them.

Digestion Experiments With Stock Food.

A great deal of condimental stock food is sold annually in this country. As a rule this is fed in too small quantities to have any marked value as a food. The manufacturers claim that its chief value is as a tonic, and that by toning up the digestive system better use is made of the other feeds and that consequently the gains are more economical. To test the truth of these seatements, The Iowa Experiment Station carried on a series of digestion experiments with the leading brands of stock foods. The stock food was fed to hogs in addition to their regular rations. It was found that the addition of stock food to the grain ration had no appreciable effect on the digestibility or rate of gain. The gains made when stock food was fed were considerably more expensive, owing to the added cost of the stock food. The details of these experiments are given in Bulletin 113, which may be obtained free by writing to Director C. F. Curtiss, Iowa Experiment Station, Ames, Oowa.

"BUCO" Hand Cultivator.

Handle 4 1-2 Feet Long

The secret of growing things is largely freedom from weeds, and cultivation. No hand too ever made will destroy weeds and loosen soil like the 'Buco," and it does it easily. It's a labor saver and a crop grower. Teeth are oil tempered steel and adjustable to different widths. If you want a nice, clean, healthy garden use a "BUCO."

Sold by hardware trade. If your dealer cannot supply them, write us direct.

Manufactured by
Bailey-Underwood Co., Ltd., New Glasgow, N. S.

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The Complete Prize List

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$11,000 in Valuable Prizes G

Readers of the Maritime Farm

An Opportunity for Subscribers to The Maritime Farmer.

We have made clubbing arrangements with The Halifax Herald and The Evening Mail, whereby our subscribers can enter this contest and participate in the distribution of the handsomest array of prizes ever given by a newspaper or magazine in the Maritime Provinces. This is an excellent opportunity open to every one living in the territory in which The Herald, The Mail or The Maritime Farmer circulates. Read carefully all about this exceptional offer, and send your name to the Contest Manager at once and get full particulars.

Act at Once.

How To Enter The Contest

Send in your nomination. You will find a nomination blank printed on this page. The nomination blank is good for 1,000 votes, which gives you a fine start.

Then enlist the aid of your friends and neighbors. Use your telephone. Let everyone know that you are a candidate before they promise their help to a more enterprising candidate.

The first thing to do is to enter your name as a candidate, then either call, write or 'phone the Contest Manager, The Herald or The Maritime Farmer, Herald Building, Halifax, for a receipt book with which to secure subscriptions. Then let all your friends know you are in the contest and request them to save their votes for you.

Candidates may nominate themselves or may be nominated by their friends.

All special vote ballots issued on subscriptions are good until the end of the contest, and they may be voted at the discretion of the candidate or subscriber.

Votes are not transferable.

Votes will be allowed on subscriptions secured anywhere in Canada or the United States. But subscriptions must be paid in advance to secure votes.

The votes will be counted and canvassed by a committee of prominent citizens.

In case of a tie the prize will be divided between the contestants tieing.

Any questions which may arise will be settled by the Contest Manager of The Herald and The Maritime Farmer, Herald Building, Halifax, N. S., and decisions will be absolute and final.

Nominations must have address of the candidate.

Nominate a Candidate.

Nomination Blank—Good for 1,000 Votes.

GREAT PRIZE CONTEST.

—OF—

The Halifax Herald and The Maritime Farmer.

I NOMINATE.....

ADDRESS.....

'PHONE .....

SIGNED. .....

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Only the first nomination blank cast for each candidate will count as 1,000 votes.

Cut out and send to the Contest Manager, The Herald or The Maritime Farmer, Herald Building, Halifax.

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Three Ford Touring Cars
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GRAND CAPITAL PRIZE

$2,400 RUSSELL TOURING CAR—For the candidate who secures the gest number of votes in the entire contest.

Prizes for the Three Districts

$1,250 FORD TOURING CAR—For the candidate in each of the three tricts who secures the largest number of votes in their respective district er the grand capital prize has been awarded.

MOTOR BOAT—For the candidate in each of the three districts who ures the second largest number of votes in their respective district. The hest among these three will be given choice of the boats.

UPRIGHT PIANO—For the candidate in each of the three districts who ures the third largest number of votes in their respective district.

SUIT OF FURNIUURE—For the candidate in each of the three districts o secures the fourth largest number of votes in their respective district.

DIAMOND RING—For the candidate in each of the three districts who ures the fifth largest number of votes in their respective district.

BICYCLE—For the candidate in each of the three districts who secures sixth largest number of votes in their respective district.

CREAM SEPARATOR—For the candidate in each of the three districts o secures the seventh largest number of votes in their respective district.

GRAMAPHONE—For the candidate in each of the three districts who ures the eighth largest number of votes in their respective district.

CANOE—For the candidate in each of the three districts who secures the h largest number of votes in their respective district.

RANGE—For the candidate in each of the three districts who secures tenth largest number of votes in their respective district.

CAMERA—For the candidate in each of the three districts who secures eleventh largest number of votes in their respective di strict.

KITCHEN CABINET—For the candidate in each of the three districts secures the twelfth largest number of votes in their respective district.

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Disarict No. 1:—Includes the City of Halifax and all territory west and h of the Intercolonial Railway.

District No. 2:—Includes Dartmouth and all territory east and north ntercolonial Railway to the Strait of Canso, New Brunswick and Prince ward Island.

District No. 3:—Includes the islands of Cape Breton and Newfoundland.

ap of Districts Will Appear Later.

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Subscriptions.		By Mail
Six months	1400 votes	$ 2.90
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Three years	25000 "	17.40
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Watch for more particulars in our next issue

INFORMATION BLANK.

Contest Manager,
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Please send me detailed information concerning **The Herald and Maritime Farmers Great Prize Contest,** and method to be pursued to win one of the many valuable prizes.

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Cut out and send to the Contest Manager, The Herald and Maritime Farmer, Herald Building, Halifax.

That's the only way you can afford to keep them, because any lameness means less work and less profit to you.

Spavin, Splint, Curb, Sweeney, Ringbone, Swelling or Lameness need not prevent your horses from working. Simply use Kendall's Spavin Cure.

It works while the horse works—takes away the pain—reduces swellings—makes legs and joints sound and strong—leaves no scars or white hairs because it does not blister.

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has been the horseman's standby for 40 years and is used all over the world.

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"I have used Kendall's Spavin Cure and it cures Old Stubborn Cases."
WILLIAM H. DOUD.

Keep your horses sound as a dollar. Get Kendall's today and you will have it tomorrow if needed. $1 a bottle—6 for $5.

When you buy, ask for free copy of our book "A Treatise On The Horse" or write us 51

Dr. B. J. KENDALL CO., Enosburg Falls, Vt.

THE HORSE.

Prayer of the Horse.

To Thee, my Master, I offer my prayer; Feed me and take care of me. Be kind to me. Do not jerk the reins; do not whip me when going up hill.

Never strike, beat or kick me when I fail to understand what you want of me, but give me a chance to understand what you want of me, but give me a chance to understand you. Watch me, and if I refuse to do your bidding, see if there is not something wrong with my harness.

Do not give me too heavy loads; never hitch me where water will drip on me. Keep me well shod. Examine my teeth when I fail to eat; I may have an ulcerated tooth. That, you know, is very painful. I am unable to tell you in words when I am sick; so watch me, and I will try to tell you by signs.

Pet me sometimes; I enjoy it, and I will learn to love you.

Protect me in summer from the hot sun. Keep a blanket on me in winter weather, and never put a frosty bit in my mouth, but hold it in your hands a moment first.

I carry you, pull you, wait patiently for you long hours, day or night. I cannot tell you when I am thirsty; give me clean, cool water often in hot weather.

Finally, when my strength is gone, instead of turning me over to a human brute, to be tortured and starved, take my life in the easiest and quickest way.—Translated from the Sweedish.

Disqualified Stallions.

The presence of one or more of the following named diseases should disqualify a stallion for public service. They are defined as infectious, contagious or transmissible diseases, or unsoundness:

Eye diseases: as cataract, amaurosis (glass eye), periodic ophthalmia (moon blindness).

Respiratory diseases laryngeal hemipleg:a (roaring or whistling,) pulmonary emphysemia (heaves or broken wind.)

Nervous troubles: chorea (St. Vitas' dance), constituting string halt, shivering and crampiness.

Bone diseases; bone spavin ring bone, side bones, navicular disease, bog spavin and curb and abnormal hocks.

Infectious and contagious diseases; glanders or farcey, maladie du coit (equine syphilis), urethral gleet, mange and melanosis (tumors), and any malformations liable to be transmitted to the offspring.

Character of Soil Influences Size Shape and Texture of the Hoofs.

The character of the soil on which they are reared exerts a not inconsiderable influence in moulding the shape of horses' hoofs, as well as upon the texture and quality of the horn. Thus it is found that the feet of young horses bred on low-lying, damp, or marshy and spongy soils grow rather big, and tend to become spreading, often being somewhat low at the heels, while the horn is coarsely textured and comparatively soft or weak. On this kind of land there is also much danger of a young horse's hoofs acquiring a bad shape through overgrowth of the horn, on account of its not been subjected to sufficient wear on such soft pasture-ground. Under these conditions it is necessary to be particularly careful to see to the feet of the young horses periodically, and if they are found to be over-grown, they should be pared down, in order to preserve their normal shape. In the case of young horse-stock which is reared on higher lying and dry soil, the feet tend to remain on the small side, speaking in a comparatipe sense; they are also usually of a slightly more upright shape than in the former case, and the horn is of denser texture, harder and possed of a good deal more toughness. The feet of our mountain and hill pony breeds are generally small, but extraordinarily tough and sound—a result of the dry and hard nature of the soil on their breeding grounds.

Wolf Teeth in Horses.

"Wolf teeth," says the veterinary editor of the Breeders' Gazette, are merely the vestigial remains of the seventh molor teeth (or anterior premolar teeth, more particularly speaking), of the prehistoric horse which existed millions of years ago. Most horses have lost all trace of these teeth which originally were present in both lower and upper jaws; some horses show them in the upper jaws and they are absolutely harmless and have no effect whatever upon the horse's eyes, his health or comfort. In a very few cases they may interfere with the check-bit and when that is so they should be removed; otherwise they should be let alone, and may disappear as the horse matures, Attempting to extract them often ends in breaking off the crowns of the "wolf teeth" and discomfort then is sure to follow the retention of the roots. Thousands of horses suffer with eye disease (periodic ophthalmia, or kindred ailments) and yet prove to have no wolf teeth when examined.

In the same way polled cattle and "muleys" suffer from catarrh, just as do horned cattle suspected of that dire but mythicgl disease "hollow horn" of the superstitious, the ignorant or the wilfully deceptive quack. The horns of all adult cattle are hollow; neither do cattle ever suffer from wolf in the tail." Put all of these things in the category of superstitions founded upon ignorance and nowadays to be relegated to oblivion along with the belief in the signs of the zodiac which have no bearing whatever upon mundane affairs and which long since have changed their course in the heavenly firmament on high.

Regarding "wolf teeth," it may be added that when a colt is first seen to suffer from eye disease and "wolf teeth" are (if present) immediately assigned as the cause by the itinerant wielder of unnecessary dental "tools," the young animal is cutting a number of great molar teeth which extend to the sinuses and cause intense irritation and inflammation of the gums, buccal lining of the mouth and lining of the sinuses and air passages. If the colt happens to have inherited a tendency to eye disease or to any other disease, this is the stage in his life when that disease is most apt to show up. It does show up in such cases and it is the irritation from teething that brings it out. "Wolf teeth" have nothing to do with it. A severe attack of distemper, or influenza, the presence of intestinal worms, starvation, indigestion or any other influence that tends to reduce the vitality of the colt may bring out the eye disease or any other hereditary disease and all irritative causes therefore should, so far as possible, be prevented or soothed by treatment in the management of young growing horses.

Remedy for Colic.

I send herewith the best remedy for all kinds of colic in horses and also good for lung trouble. Fluid extract belladonna 1 ounce, nux vomica 1 ounce, colocynth one ounce, aconite one ounce. Give every half hour for three doses. Dose three-fourths of a teaspoonful. This is the remedy used in the lumber camps of Northern Michigan.—Sunscriber.

The feet need rest from the shoes occasionally, and must have it or the feet will suffer for it.

Teething children have more or less diarrhoea, which can be controlled by giving Chamberlain's Colic, Cholera and Diarrhoea Remedy. All that is necessary is to give the prescribed dose after each operation of the bowels more than natural and then castor oil to cleanse the system. It is safe and sure. Sold by all dealers.

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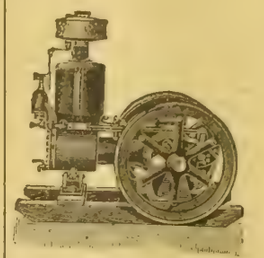

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POULTRY.

Feather Eating.

Some consider feather eating a disease, others consider it a habit born of idieness, while still others call it a vice the cause of which is a lack of some food element. Perhaps in different cases all are right, for there seems to be a variety of causes leading to the same result. In some cases it is started by the fowls picking at the feathers in an effort to dislodge lice or mites which torment them constantly. Sometimes they do not desist from the practice when the lice and mites are completely eradicted, either because they like the bit of moisture at the base of the feather, or because they have gotten into the habit. Some cases seem to occur from a lack of meat food and the remedy is, of course, meat. To supply this hang up a rabbit carcass, a bit of fat meat or feed ground green bone. Or lacking these, break a dozen fresh eggs in a quart of wheat bran and give the thoroughly stirred mixture as a feed. Another good combination is new milk and bran fed for several days. If it seems to be only a habit dip the fowls in a disagreeable coal tar dip; this will often break it up entirely. Changing to a new location often diverts the attention of the fowls from the habit. Idleness should never be tolerated in any flock and where this is the cause of the habit in a flock the remedy is work. Exercise should be forced upon the chickens in every way possible. No idle fowl is a profitable one, so aside from the cure of this vice exercise must result beneficially. Sometimes thirst from neglected watering fountains leads the fowls to begin feather eating. Not so much, we believe, from a desire to obtain the bit of moisture adhering to the feather, but because the fowl tormented by thirst desires something and not knowning what, developes an abnormal appetite for bits of string, bright glass, feathers, etc.

Fowl on the Farm.

The farmer keeping fowls under the conditions found in the ordinary farm wants fowls that will rustle, will go out into the fields and meadows and pick up a part of their living. He wants a breed that is not in any way an odity. To him large crests and heavily feathered legs and monstrous combs are objectionable, because he does not see that they serve any useful purpose. He feels that such superfluities are out of place on the farm. As on most farms chickens are hatched and reared in the natural way, the farmer's hens must be sitters. The farmer's breed must be suitable for meat as well as eggs, so that the surplus poultry may be disposed of at a profit in the fall.—Plymouth Rock.

To get Rid of Chicken Lice.

To rid small chicks, turkeys and goslings of lice take a tight box large enough to accomodate your flock take paper and pour kerosene oil on paper until it drips. Place this paper in the bottom of the box with the chickens on it. Then place another oiled paper over the chicks so that the box is air tight after you have covered the top of the box with an old carpet. Let this be on there only ten minutes then remove your chicks and you will find them free of lice. Repeat in a few days if necessary. I have used this remedy for years and find it a good one as I have never lost a chick when this was used.

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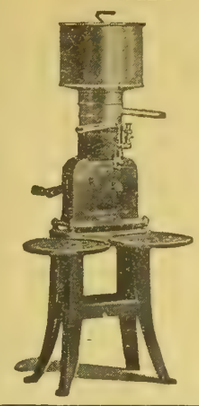
The Cheapest and the Best.



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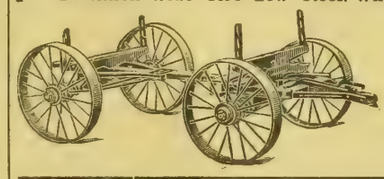
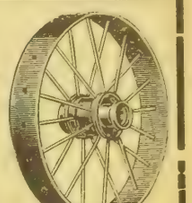




Dominion Wrought Iron Wheel Co., Ltd., - - Orillia, Ont.

How to protect Hens from Hawks.

In a great many sections of Eastern Canada hawks do a great deal of harm every year in carrying off fowl and farmers have always experienced more or less difficulty in putting a stop to their ravages. Here is a simple plan originated by an American farmer who tells it as follows:

"For many years we have been troubled with hawks and crows taking our chickens. We have tried traps, poison, guns, and all sorts of scarecrows; but have never quite protected the chicks until this year. This year I selected a half dozen of the longest strips or edgings from a nearby mill, say 12 to 16 feet long. To one end I tied two empty tin cans, punched holes in the bottom of the cans and tied them bottom upward, two on each strip, leaving the strings 12 to 18 inches long. Then I nailed the strips to fence posts, corner of barn or shed, or anything handy. After having them up now for more than a month, not a hawk or crow has been seen on or near the premises; whereas before this there were daily visitations. The cans bump against each other in the wind and glisten in the sun, and the feathered pirates give us a wide berth. It is the cheapest and most effective protection the chickens have ever had."—A. Jeffers.

Suitable Coops Should be Supplied for Young Chicks and Loss from Tranping Prevented.

Everyone who raises many young chicks in the same enclosure or on free range with older ones should have a feeding run. Most small chicks eat with the hen and away from grown ones until weaned, but after weaning time they must take their chances among older fowls and chicks of all ages. The tiny ones are tramped on and often robbed of their share by the greed of the larger ones, the latter getting overfed to the detriment of all. The feeding coops should be made as follows: Take poultry wire that only admits the smaller chicks; this should be covered over the top also. Then make another to admit a still bigger size of young chicks. When you put feed in one for small ones first, then the little ones will all go in there. Next feed the bigger ones and lastly the older fowls or chase them off. It is best to feed small ones first or they will go into the one intended for bigger ones and get as badly tramped as ever. Chicks cannot thrive as they should if all sizes are fed together. The colony plan is always preferable if possible, but where this is impracticable try to do what you can to assist the little ones to get a fair show among the older fowls. If you feed according to size you can also feed diffeeent feeds to chicks of different ages which is an advantage.

Gape Cure

Gapes are the result of parasitic worms in the windpipe. One cure is to dislodge them. This is sometimes accomplished by placing the chicks in a box covered with muslin and dusting fine lime through the cloth The chicks breath the lime, and, as it comes in contact with the worms, these let go of the membranes and are dislodged by the coughing and sneezing caused by the lime. To prevent gapes, keep the chicks on ground where fowls have not previously been. This may be done either by spading old ground deeply, each year, or keeping them outside the poultry yard.

Separating the Sexes.

Most authorities advise one to separate the cockerals from the pullets as soon as they can be distinguished. It is doubtless a good practice to part them when the cockerels are large enough to be troublesome, but with young chicks one must be very careful to keep those of different ages apart. The big ones will be sure to crowd the younger ones. All weak chicks or those that are not thrifty should be put away from the others. It is not always necessary to yard each lot; confine them to their house for a short time, and though they may roam all over during the day they will come home to roost.

THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

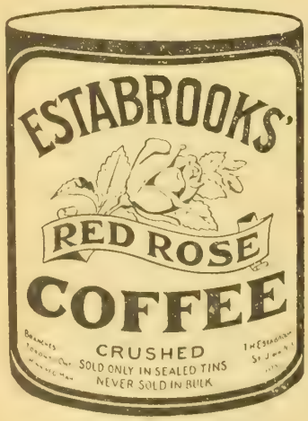
The Lilt of a Laugh.

I've toiled with the men the world has blessed,
As I've toiled with the men who failed;
I've toiled with the men who strove withzest,
And I've toiled with the men who wailed.
And this is the tale my soul would tell
As it drifts o'er the harbor bar:
The sound of a sigh doesn't carry well,
But the lilt of a laugh rings far.

The men who were near the grumbler's side.
O, they heard not a word he said;
The sound of a song rang far and wide,
And they hearkened to that instead
Its tones were sweet as the tales they tell
Of the rise of the Christman star.
The sound of a sigh doesn't carry well,
But the lilt of a laugh rings far.

If you would be heard at all, my lad,
Keep a laugh in your heart and throat;
For those who are deaf to ascents sad
Are alert to the cheerful note.
Keep hold of the cord of laughter's bell,
Keep aloof from the moans that mar;
The sound of a sigh doesn't carry well,
But the lilt of a laugh rings far.

Good coffee means a good breakfast. Nothing takes its place. Nothing tastes so good. Estabrooks' Coffee has the vigorous strength and delicate richness which brightens and satisfies the appetite. Clears the brain. A good starter for the day.



Sold only in 1 and ½ lb. tins.

Try it for breakfast to-morrow

72

Jacassa's Journal.

(Continued from last Issue.)

"What if you were to fall asleep now, and, on waking, find yourself transported to the other side of the great water?" he asked, smilingly.

"I should think that the dainty Puck, who 'puts a girdle round the earth in forty minutes,' had a hand in the matter," I laughed; "but I fear I should scarcely credit the evidence of my waking senses. I should believe I was in Magic Land."

"'Magic Land!' Ah, that recalls an exquisite poem I read the other day, which haunts me like a dream. Let me repeat it, please, for it conjured up again my own sensations on the morning we anchored in the Bay of Naples." And, slightly leaning forward, with his eyes bent dreamily out on the sea, he repeated, in a low, deep-toned voice:—

"By woodland belt, by ocean bar,
The full south breeze our forheads fann'd,
And, under many a yellow star,
We dropped into the Magic Land.

There every sound and every sight
Mean more than sight and sound elsewhere!
Each twilight star a twofold light;
Each rose a double redness there.

By ocean bar, by woodland belt,
Our silent course a siren led,
Till dark in dawn began to melt
Through the wild wizard work o'erhead.

A murmur from the violet vales!
A glory in the goblin dell!
There Beauty all her breast unveils,
And Music pours out all her shell.

We watched toward the land of dreams
The fair moon draw the murmuring main;
A single thread of silver beams
Was made the monster's rippling chain.

We heard, far off, the siren's song;
We caught the gleam of seamaid's hair;
The glimmering isles and rocks among
We moved through sparkling, purple air.

Then morning rose, and smote from far
Her elfin harps o'er land and sea;
And woodland belt and ocean bar
To one sweet note sigh'd—Italy!'

"What think you of the poem?" he asked after a little silence, broken only by the rippling breakers.

"It is more than beautiful!" I answered, with a long, deep inspiration, for I had sat with hushed breath—"it is exquisite! How like Tennyson—

And, under many a yellow star,
We dropped into the Magic Land.

Oh, I envy you, Mr. Meredith, your sojourn there!"

He smiled. "You have an enthusiastic nature," he said. "You should visit Italy! you may, some day, stand under its serene skies and wander through its grape-purpled valleys but, do you know that, since we have been sitting here in the twilight, I have thought of a land which would possess for you a far more appreciated and native air than the clime of Italy! You cannot guess what land I mean, Miss 'Cassy?"

"Indeed I cannot, unless you mean —Heaven!" I replied, looking up and smiling in quiet wonder. "I hope you don't want to send me there yet awhile, Mr. Meredith, for I shall be very content If I reach it by and by "No not Heaven yet awhile, 'Cassy"—and it thrilled me as he laid his hand on mine; "at least, not that upper abode you mean, though I hope we may both be so unspeakably happy as to reach there some time, together; but there is a lower heaven—a 'Magic Land more fair than Italy, which your feet should walk in here—I mean the magic Land of Home! And, 'Cassy—so lonely, so beloved—will you not give me consent to guide and dwell with you there?" And in an instant I was drawn to his throbbing heart.

Who would have believed it, that he could have so concealed his feelings all that time? for he told me afterward, that he had loved me from the first. I scarcely could. I asked him, after I had grown calmer from my passion of tears that Kate Harlow would say; but he replied that she would love me like a sister —he had long been like a brother to her. And then, while he turned his horse's head homeward, he planned everything in his own way, and I was not "strong-minded" enough to resist. He says we must be married soon, before he leaves Ryefield; that my pen and papers must be locked up, and I must devote one year of my life to learning to love him as well as I "doted' on Montague Livingstone Wentworth.

I heard him passively, like one in a dream; I wonder if I am dreaming, now, this August morning, as I sit and write! But, no! I hear his foot on the stairs—his voice' "Come down 'Cassy! At that pen again, I'll warrant! I'll levy an 'attachment,' and place it under arrest for safe keeping Hurry, please! Here's Aunt Sarah wanting to consult you about certain loaves of cake for a certain occasion!-'

Later.

"The Lor'!" exclaimed good Mrs. Hull, taking me into her arms as I descended to the sitting-room. "To think 'Lisha's been and told me—and if I'd a planned it all, it couldn't a come more to mind! How dreadful pleased Amos 'll be! 'Twas only yesterday he said how natural like it seemed to have you in the house — jest like one of our own. Dear children! I'm so glad you chose her, 'Lisha! And to think you never knew she wrote; and 'twan't the po'try that done it! But there! go right up stairs, child; it's too bad to keep you a colorin' up so! 'Twasn't about the cake, nor nothin' I wanted to speak to you. For shame, 'Lisha! I've allers heard say that lawyers didn't mind sayin' anything anything as comes into their heads!" And under cover of good Aunt Sarah's advice, I escaped to my room; though Elisha shook his finger at me and bade me not exceed his warrant of "just ten minutes.'"

Elisha. That is not a romatic name—I never should have chosen it for a hero—but there is no other name in the world I like so well now How could I help liking him? But I wonder what he saw to love in me! I will go and ask him; and if he is quite sure he does not like Kate Harlow best, after all? I know what he will tell me, though. There, he is calling! "'Cassy!"

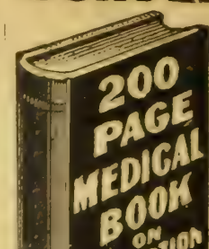
Good-bye, my pen! Elisha says you must have a long rest now. I will hide my journal before I go down, that nobody can ever see or read what I have written here, unless I read it to him some day.

"Come down 'Cassy!" he calls again; "or I shall come up and fetch you!"

"Yes, yes, I'm coming! Dear Elisha I'm coming!"

The End.

Consumption Book FREE



This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Even if you are in the advanced stage of the disease and feel there is no hope, this book will show you how others have cured themselves after all remedies they had tried failed, and they believed their case hopeless.

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Annt Tabitha's Fireside.

"Who on airth is comin' up the lane? Do run to the winder, Paul, and see ef you can find out, while I slip on my best cap. Lizzie, where is it?"

"Which one do you mean, Aunt Tabitha?"

"Why, the one you trimmed with laylock-colored ribbin, last week. That's the one. Now, help me about putting it on. Massy on me, if I ain't all of a flutter, for 'tis plain to see that it must be somebody that's purty grand, to ride in a coach with sich a power of gold-leaf put on crinkle-crankle all round the edges. And then there's the two black horses, that look as much alike as two peas, and shine and glisten equal to Major Creasy's best calf-skin butes, that he wears grand muster days, arter he has made his boy Zeke rub and polish 'em with Day & Martin's blackin'."

"Why, aunt, that's one of the railroad coaches," said Paul.

"Du tell! Well, I do declare, ef it don't look smart enough for the President that the free and enlightened citizens have placed at the helum of thie great country, as young Skgire Hitchens said in his Fourth af July oration. I've seen the time when I shouldn't thought it a hardship to walk the matter of half a dozen miles to get sight of sich a grand lookin' coach as that. The land, how this cap bothers me! I've git it all one side. Lizzie do put it straight for me once more, and I'll try to keep it so. There, Paul, the coach has stopped, and the folks in it are getting out. Ef you'll jest go and wait on 'em in, I shall be one of the most thankfulest critters that ever breathed the breath of life.'

"I'll do it with the greatest pleasure, aunt; so all you've got to do is to get your cap straight."

"Stop, Paul, and I'll go with you Whether my cap's straight or crooked is all one to me, for ef that ain't brother Dawkins and his wife, that moved up into the Ohio country eight or ten year ago, I'll never guess ag'in.

"You are right, aunt," said Lizzie. "I remember how they looked, for

Was Troubled With His Liver For Four Years.

Doctors Gave Him Up.

MILBURN'S LAXA-LIVER PILLS
CURED HIM

Mr. Harry Graves, Junkins, Alta., writes:—"I can not say enough in regard to your wonderful Milburn's Laxa-Liver Pills. For four years I was troubled with my Liver, and at times it would get so bad I could not move around. At last the doctors gave me up saying it was impossible for me to get cured.

My father got me four vials of your Milburn's Laxa-Liver Pills, but I told him there was no use trying them and that it was only a waste of money, however I took them and to-day, six months later, I am a well man and weigh twenty-four pounds more than I did. I would advise all Liver sufferers to use them."

Milburn's Laxa-Liver Pills are 25 cents a vial, or 5 vials for $1.00, at all dealers, or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

all I was such a little girl when they moved away."

"Why. Darcus Dawkins, how do you du? I was thinkin' no longer ago than yesterday, that 'twas more'n like as not I should never set eyes on you ag'in as long as I lived, nor brother Jacob nyther. Well, you both look as nateral as life—haven't altered a single artom, as I can see. Come, Jacob, take off your woosted comforter; it's a beauty. Did Darcus knit it for ye?

"Yes. I told her there was no need of my havin' one—thought 'twas no use for me to bundle up in that way; but she wouldn't here a word to me, and so, arter she'd knit it, I thought 'twas as well to wear it.'

"Sartain it was; and now take off yer great coet, while I help Darcus off with her hood and cloak, and the rest of her things. Paul, give the fire a stir, and throw on a few more sticks of that dry maple, for I should think yer uncle and aunt would be chilled through, ridin' this cold day. Come, Darcus, and set in this 'ere rockin'-cheer, and, Paul, hand your uncle the mate to it. Now Darcus, the fust thing you do must be to tell Lizzie and me hoe yer darter Nabby is,"

"Oh, she's the same old sixpence, as the sayin' is, that she al'ays was.

"Smart to work as ever, I s'pose,"

"I guess you'd think so, ef you could see the work she turns off in a day. She could al'ays do as much as any two hired gals I could get, when she lived at home; and now she's got a family of her own, she don't let any grass grow under her feet, I can tell ye,"

"Du tell ef Nabby is married?"

"Yes, indeed. Didn't you never here of it?"

"No never heard a single liso about it. How long is it sence she was married?"

"Well, the knot was tied Thanksgivin' Day, but whether 'tis five or six year ago I can't for the life of me remember. Which is it, Jacob?"

"Well, I should say 'twas five year and six months sence."

"What do you know by?"

"The age of my best pair of team horses, to be sure."

"La, yes, I might 'ave thought."

"Who did my cousin marry?" inquired Lizzi?.

"His name is Smalley. You remember old Deacon Smalley, Tabitha that used to live next neighbor to Daniel Pilsbury, don't you?"

"Yes, I guess I do. He was a purty good kind of a man, and well to do in the world."

"Well, Nabby's husband is Deacon Smalley's oldest son."

"Du tell!"

"'Tis sartain so, and his name is David. The Deacon had three more boys, you know—John, Sam, and Job—and they've turned out well, all but Job, and he's a well-meanin' soul as ever wore shoe-leather, but he's terrible shiftless."

"And David—has he got together a purty good interest?"

"I guess he has. There ain't many cicher men in Ohio than David Smalley is."

"And what kind of a weddin' had you?"

"Fust rate. Everybody fur and near was invited, and they wa'n't very back'ard in acceptin' the invertation. They all stayed to supper, and ef there'd ben twice as many there wouldn't 'ave been any lack of the where-with-all to treat 'em with. You know what a good pervider Jacob always was, and he's just as free hearted now as he used to be. There were turkeys and chickens roast and b'iled, pies, puddings, and tarts, and all kinds of preserves, to say nothin' of the great loves of riz bread, the soda-biscuit, and sweet cake of all kind, from the best of pound-cake down to merlasses ginger bread; and then, to crown the whole, there were two great loaves of weddin'-cake. Sary Bright called it bridle-cake, but what it had to do with bridles is more'n I can tell, but I wouldn't show my ignorance by askin'. As I was sayin', there was two great loaves of weddin'-cake, jest as good and rich as they could be made and all frosted over, so that they looved as white as snow-drifts; and then, peerched right on top of each of 'em, was two birds; I thought then, and I think so still, that they looked like hawks, but Sary Bright said they were meant for doves."

"Well, I should liked to have ben there, that's sartain. What was Nabby dressed in—white satting?"

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Read every Ad. in this issue.

"No That's what she thought of havin' at first, but the mantlemaker said there was a kind of French stuff called tarlantane, that was a great deal more fash'nable and stylish than white sattin, so she concluded to have hers made of it,"

"And how was David dressed?"

"All in superfine broadcloth, from top to toe. There wasn't an inch of hum'spun in his whole suit, not even the linin' of his waistcoat; and in that I thought he was a leetle mite extravergant, for I had a piece of bleached linnin in the house—every thread of it was spun and wove by to line his waistcoat and coat-sleeves my own hands—that would 'ave done too."

"They're talkin' about Nabby's husband," said Mr. Dawkins to Paul who caught a few words of what they were saying, "which makes me think of Deacon Smalley, his father and a leetle something that happened when I was a youngster about your age."

"What was it?" said Paul. "I should like to know."

"Well I guess I'll let your aunt Tabitha tell you. She was there, as I very well remember, and can recollect partic'lars enough sight better'n I can."

"What's that you think I can remember so much better'n you?" asked Aunt Tabitha.

"I mean that little affair that happened over twenty year ago, the day the schulemaster delivered an address on edication."

Continued in Next Issue.)

Annette Kellerman on Learning To Swim.

If you have to learn to swim alone, choose if possible a place where the water is shallow, but not too shallow; say up to your chest. This, that you may be able to swim without your feet touching bottom. yet have the feeling of security that an assured footing gives one. If you can find an assistant get used at once to deep water.

In learning alone in shallow water allow yourself to drop slowly from a standing to a swimming position and try to lie comfortably with feet a little below the surface and mouth submerged. The water line should come between the mouth and the nose. The muscles should be relaxed and no part of the body rigid or strained. There is no need to crane the neck in order to keep the mouth above water it only tires without helping, and it destroys the balance of the body. The arms will lift you while they apply their power and you can breathe freely without raising the head at all.

Having assumed the proper position, go slowly through the movements until you feel yourself sinking, then just put down your feet, stand up and try again. But don't hurry. Take only three or four strokes, at first; take only one if you find yourself unable to do more without sinking, but make that one a correct and a deliberate one. You can afterward increase one by one if you can do no better.

Colic and Croup.

Heat, in good quantities, will usually overcome colic. When the child is seized with this, begin by giving him a hot bath, then apply hot water bottles and mustard plasters where the pain is located. Diarrhoea will generally yield to a dose of ginger or peppermint tea, or some other hot drink, coupled with hot compresses, or mustard plasters on the stomach and soles of the feet. In cases of vomiting if the child is lain down and given large quantities of water, as hot as he can tave it, with the trouble should disappear. Croup, a mustard plaster on his stomach, another of the common children's diseases, is not very amenable to home treatment though in sudden cases, it can sometimes be stopped by rapidly diverting the attention of the sufferer to something that interests him.

A Baby's Hot Water Bag and Cover.

My daughter received one of the most useful gifts for her baby. It was a little hot water bag in a dainty flannel case. This cover is made of two pieces of fine flannel, scalloped and button-holed around the edges with heavy blue silk, fastened together by a blue ribbon run through embroidered eyelets. A design of for-get-me-nots is embroidered on one side. It is easily laundered. All she has to do is to take out the ribbon and the two pieces of flannel are washed in no time. This little hot water bag is in continued use, in the baby carriage on cool days, and in her crib on chilly nights

If one wishes to make a gift for a baby she can choose nothing more welcome, I am sure.

Advice to a Country Woman.

Mme. Qui Vine, writing to "Country Womgn'j in the Chicago H?rald says :

Do you want to know why the country woman's dress looks so dowdy on the streets of a big city? Because, as a rule, the country woman overdresses. She has not learned that elegance is plainless, simplicity and soft, dark or subdued colors. On the counters of shops are many worthless and meaningless things—like gilt belt buckles, stickpins, bangled bracelets, chains, fussy neck affairs and general tralalas of dress.

These you must shun, lor they signify neither taste nor necessity. Never buy a white hat. A white hat is a horror, and usually a soiled horror at that. Don't wear silks. Get plain cloth, and have it made up plainly. A plain sailor hat is better than a toppiece trimmed with a cheap and draggly plume.

Strawberry Vinegar.

As strawberries become cheaper and finer in quality be sure to put up a supply of this very delicious vinegar for hot weather drinks. Stem and wash one quart of the berries, drying them well. Put them into a stone jar and pour over them some good French vinegar, allowing one quart to every two pounds of berries. Let stand twenty-four hours, then strain through a jelly bag. Add the second quart of berries and let stand twenty-four hours longer. Again strain and add to the fruit. Repeat the straining and adding to the fruit three times and again strain and add the sugar, allowing a pound of fine cane sugar to every pint of juice. Boil all together for half an hour; then let get cold before bottling and sealing.

Salt as a Dentrifice.

Common salt is an excellent dentrifrice, keeping the teeth white, the gums hard and the breath sweet. Use a weak solution for washing the teeth after every meal.

Eggless Cake.

One cupful of sugar, one-third cupful shortening, three cupfuls flour, obe cupful sReet milk, and three teaspoonfuls of baking powder. Beat thoroughly to make this light and flavor with any extract desired.

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The Kitchen Entrance.

A kitchen entrance should be as logical a part of the house as a front entrance. To have a kitchen entrance that juts out from the rest of the building like a loosely attached woodshed shows carelessness in planning. In the country, and the suburbs especially, the back of the house is as important as the front in establishing the right tone to the place. One of the best signs of sincerity in our houses is the growing use of the term "garden side" for the rear of the house.

Strawberry Syrup.

Over three quarts of hulled berries pour sufficient vinegar to just cover, let stand for two days, then drain off all the liquid without pressing. Pour it over a second lot of berries, let stand as before and drain a second time, then measure. For one quart take over half a cupful of water, add to it one tablespoonful of whole cloves and two tablespoonfuls of broken stick cinnamon and simmer gently for fifteen minutes. Strain, pressing hard, add to the measured vinegar and bring to the boiling point. Add two pounds of granulated sugar, boil for ten minutes longer and bottle. A few tablespoonfuls to a tumbler of cold water will make a delightful summer drink.

Fevers.

Children suffer from many complaints which can be helped by prompt action before the doctor arrives. Fever is perhaps the commonest of these. The child should be put to bed when the first signs manifest themselves, and be covered lightly. Nothing in the way of nourishment should be administered, except milk or some like cooling drink, until professional advice can be secured. A cool bath will also prove a help in most instances.

A Fine Washing Fluid.

A most excellent receipe for washing fluid is as follows; one lb. can of potash, one oz. of each salts of tartar, borax and ammonia. Have the druggist to pulverize each and mix salts of tartar, ammonia and borax together. Pour one gallon of rain water on potash and add the other ingredients when cool. Use one teacupful to each boiler of clothes. Soak clothes in warm water first and proceed as in ordinary washing. In cleaning an ordinary porcelain sink and wash basin use common baking soda. Wring out a cloth until quite dry, then put soda on cloth and rub soiled places and any one will be pleased with the result.—Mrs. Lottie Hook.

The Cause of Whooping Cough.

Whooping-cough is regarded by most parents as a necessary evil. Children are expected to suffer from this complaint at one time or another during their years of childhood. It frequently occurs in babyhood; though the attack rarely occurs during the first three or four months of an infant's life. The reason for this apparent phenomenon is probably due to the fact that whooping-cough is brought about by certain conditions, and during the first three months of existence the causes that produce the complaint have not had sufficient time to operate in order to develop it. True, the average physician will tell you that whooping-cough is a contagious disease, it is really made possible by vital depletion, or by the presence of certain poisons in the blood that are continuously seeking an outlet.—Bernarr Macfadden, June Physical Culture.

Salad of Nuts and Green Peas.

A delicious salad may be made by combining green peas and English walnuts in the proportion of two-thirds peas to one-third nuts and mixing with a mayonnaise dressing. Serve on lettuce. If tomatoes are in season, slice small ones and arrange around the salad inside the lettuce.

A woman whom we magazine editors held in profound respect has passed to her reward—Louisa Knapp Curtis, the wife of Mr. Cyrus K. Curtis, publisher of the Ladies' Home Journal. Mrs. Curtis was the editor of that magazine during the first six years of its existence, in which time it attained a circulation of 500,000 copies. Mr. Bok, who succeeded to the editorship, married her daughter. A woman of rare nobility and charm, as wife, mother and editor, Mrs. Curtis is held in reverent memory.

Bathing Towels.

It is well to heat the towels when bathing a baby as an invalid. They dry the skin more quickly and that moist sticky feeling that so often follows a bath is avoided.

The Relationship between Dust and Disease.

"In Outdoor Life, the journal of the Saranac Sanitorium the relationship between dust and disease is graphically described. On the coast of China it is said, is found a seaweed from which the natives prepare a jelly, agar-agar, which serves them as an article of diet. The jelly prepared from agar-agar is transparent and of a pale yellowish green color, very much like our gelatine, but it solidifies into a firmer mass. This substance finds little if any use in this country as an article of diet, but it is used in all, baeteriological laboratories as a medium on which to cultivate bacteria. Wherever a living germ has fallen on the surface of the agar-agar during the few minutes that the cover was removed from the dish on the previous day, a colony of bacteria has grown, and from each germ thousands of descendents have arisen.

"Gotable among the dust borne diseases is tuberculosis. The germ causing this disease is thrown off in enormous number in the sputum of advanced cases, and if such patients

This Man is Young at 55 Years.

He is a "Health Belt Man;" therefore has the vitality and hot, red blood of youth in his veins; he towers like a giant above the ordinary difficulties of life—be a "Health Belt Man" yourself—it gives manly strength; it makes you young and keeps you young all the days of your life; it takes all the coward out of your make up—let me give you of this abundant vitality, then nothing can ever conquer you but death itself—100,000 men have taken my advice, why not you ?

The secret of life-long youth may be summoned up in one word—Vitality. If you have this great natural power in abundance years count for nothing. I use no drugs, I recommend none. Just the Health Belt. No privations, no dieting and no restrictions excepting that all dissipation must cease. Put the Health Belt on nights when you go to bed; let it send its power into your nerves, organs and blood while you are sleeping It gives you a great flow of soft, gentle galvano-vital electricity during the entire night. One application and you are like a new being; it takes all the pain and weakness out of your back; it makes you answer the morning greeting with "I'm feeling fine." It is a great strength builder; it overcomes the results of earlier mistakes and indiscretions; gives you a compelling power, so that you are attractive to all women and men with whom you come in contact. Three months' use is sufficient. S. Coolen, Hubbards Cove, N. S., writes: "I am a man again, thanks to you. Nothing can discourage me now."

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spit carelessly about the house or on the streets the sputum dries, becomes pulverized, and, as dust carrying the germs, may be breathed into the lungs of healthy persons and there set up the disease. In the same way the germs carrying diptheria and a number of other diseases may be distributed and infect humanity. There are, of course, numbers of other sunstances besides agar-agar which are used as food and in which or upon which germs may flourish. The commonest of these is milk. Says Dr. Moss, of the Johns Hopkins Hospital, 'introduce a single typhoid fever germ into a pitcher of milk and allow it to stand over night in a warm place and millions of typhoid germs will develop. A single typhoid germ, if swallowed, would scarcely cause typhoid fever, but drink a glass of milk from a pitcher into which a single typhoid germ gas fallen a few hours previously, and you will almost certainly develop typhoid fever."

How often one has heard concerning a child or an adult who has developed a contagious disease. "I cannot think where or how he or she has caught it!" Perhaps the answer is Dust."

The Art of Reading Aloud.

Elocution and dramatic expression have become a fad. The ability to read aloud history, poetry, descriptive articles, in such a way as to bring out the meaning and give pleasure to the bearer, is not as common as it should be. No accomplishment is more suited to the capacity of young people or better calculated to give pleasure at all times. A good reader can while away many a weary hour for an invalid, or amuse, interest, and keep out of mischief the younger children, or give pleasure to the minds of the sewing society whose fingers are busy or earn an honest shilling or two, for in a city there are many wealthy invalids, or lonely women, who gladly pay to hear a pleasant voice a few hours each day.

The first requisite is a low pitched voice. That of the average English girl is pitched at treble G, while it should be at least as low as G below middle C. Try the voice with an organ, and practice talking in the key of this low G, until it becomes conversation. If you suddenly catch easy and natural. Remember it in your voice in shrill tones, lower them. A low voice, however, does not mean any lack of force or clearness. An organ or piano is made in imitation of the human voice. In both the high notes are thin and shrill, the lower ones increasing in power and richness. An alto voice is generally much sweeter than a soprano. Be careful to form all letters, words, and syllables as near the lips as possible, using the vocal chords in the throat to give depsh, richness, and volume.

Next to a musical voice is correct pronunciation and distinct articulation. Be caseful to give every letter its correct and perfect sound . Perhaps the most common and unnoticed errors are a neglect of final d and a pronunciation of e or i before r like u, as "gurl" for girl, "murcy" for mercy, "furst" for first, "furm" for firm, and so on. Only when the r is double, followed by a vowel, and in her, sir, and a few other common monosyllables, it is sounded like ur. Look up the pronunciation of every word about which you have the least doubt.

Read slowly, take time to breathe tranquilly, try to express the meaning of what you are reading by emphasis, but do not let emphasis spoil the smoothness. In reading prose, try to bring out the rhythm which we strive to avoid in reading poetry. There is not much rhythm in newspaper writing, but all real literature is rhythmical. If you find a book is not interesting, or seems silly, when read aloud, it is not worth reading at all.

Fencing the Farm.

(Continued from page 637.)

grubb them out, especially the small underbrush, clean it away completely.

3. Any stone along the line should be removed to some low place where they can be completely covered or they may be put into the roads which is the proper place for them, rather than along the fence where they harbor weeds.

4. Strike out a ridge along the picket line and plough about 12 feet wide, disc and harrow as if for a crop.

. If any sharp knolls are along the line put on the team and scraper and level. Nothing is so unsightly as a fence following every little hill and hollow.

6. Put down the small pickets from 20 to 30 feet apart. The corner and brace post should be made much firmer as also the gate posts which should be made similar to the corner posts.

7. Use cedar for posts if it is possible to secure them and put the large end in the ground, but first take the bark off and smoothen the knots.

8. Use plain wire with good strong stays for uprights or good strong woven wire makes a good fence. Barbed wire is a thing of the past.

9. Put on the top wire first and grade it perfectly. The bottom wire should be high enough from the ground to allow the grass to be cut with the mowers or scythe.

10. Cut the posts off 3 inches above the top wire and make them round to shed the water. A good coat of paint will improve the appearance of the whole job.

Finally, seed down the whole length of the twelve foot strip (mentioned under 4th point) with a good mixture of permanent grasses. This will keep weeds from growing and will be useful for feeding. If later the whole twelve feet is thought to wide ploughing can be done up to as near the fence as thought advisable.

JOHM FIXTER.

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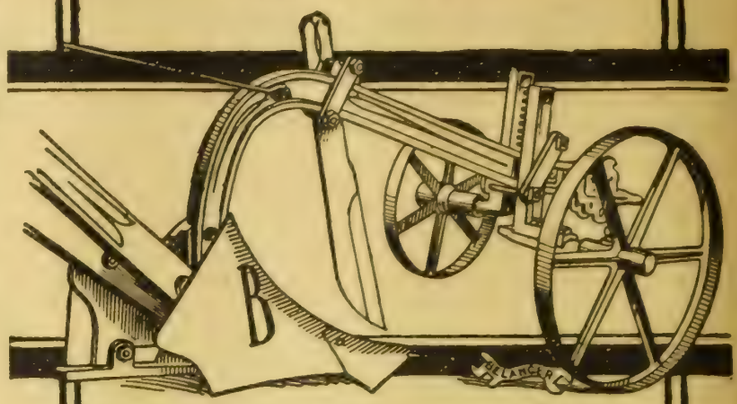

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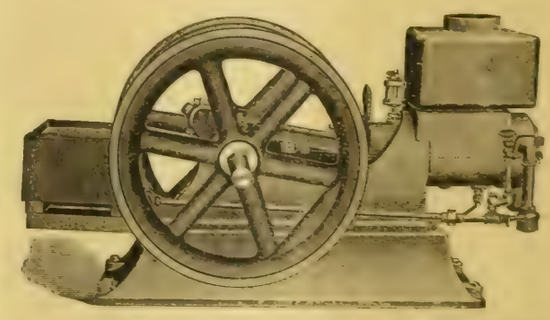

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It is easy to spray thoroughly with "VANCO" Lead Arsenate because it does not settle quickly in the spray tank, does not clog the nozzles, and shows so plainly on the foliage that you can tell when you have covered the whole tree or plant.

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Fredericton Business College
opens its splendid new rooms for the FALL TERM.
We are making preparations for a great big attendance this year.
If you have not already received a catalogue, write for one. Address,
W. J. Osborne, Principal, Fredericton, N. B.

Your old Carpets will make you handsome Rugs. Write for booklet, mailed free.—THE MARITIME RUG WORKS, St. John, N. B.

Queen Rearing.

Artificial swarm control, artificial divisions for increase and artificial stimulating are now successfully practised but the subject of artificial queen rearing, which should go hand-in-hand with these, is handled rather gingerly or left in the hands of specialists and yet a knowledge of this subject is the basis of success with the others. If we prevent our bees from swarming, where are the young vigorious queens to come from to head next year's colonies. Of what use are artificial divisions if we cannot supply them with properly raised cells, or of what advantage is stimulative feeding if we do not have queens in the hives with vitality enough to respond to the stimulating?

It is very interesting and instructive to trace the development of the methods now largely employed by beekeepers to obtain increased yields of honey and at the same time to keep under control the natural swarming impulse. It may also be instructive to note how these manipulations affect the welfare of the colony in the generations to come.

Probably the simplest manipulation is hiving the swarm on the old stand thus throwing all the field bees in with the new swarm to give an added impetus to honey gathering. This manipulation certainly accomplishes the object sought. It concentrates a tremendous force of field bees for gathering in the crop, and as there is no brood to look after for a few days the honey piles up very rapidly in the supers. But what about the partially developed queen cells in the old colony that has been drawn on so heavily for bees? Does it seem reasonable that they will receive the warmth and attention so necessary to their growth into good, vigorous stock?

Another manipulation generally practised in the control of troublesome after-swarms by breaking down the cells left in the hive after the departure of the prime swarm, leaving only one cell to hatch out. This also accomplishes the object sought. No after-swarm will issue if there is only one queen cell present in the hive but the same objection applies here as in the former case. The few bees in the large chamber will not give any more attention to one cell than they would to six. If the nights are cool, they will cluster in the centre of the hive perhaps away from the queen cell, leaving it unprotected, and the young queen will thus be injured.

Next in order is the practice of universal shaking. By this method colonies are examined every few days and any found making the first preparations for swarming are shaken on to new combs on the old stand and the brood disposed of in various ways. From the standpoint of improvement in the stock this method is the most rational of any since there is no endeavor made to raise queens under unfavorable conditions and the bee-keeper is forced to work out some other method of propagating his stock. We must all face this problem sooner or later and although there are many difficulties awaiting the bee-keeper who proposes to raise his queens artificially, yet after he has mastered the subject I believe that he will consider the time well and profitanly spent. The system of shook swarming lends itself admirably to production of the finest queens and it is the writers wish to sketch briefly such a method, one that can be readily adopted by any careful bee-keeper.

Wait until colonies are being shaken and there is plenty of brood in upper storeys.

There is nothing in the system which we use but what any bee-keeper can adopt. It is a well known system; it has been developed from several different queen breeders. We use the Doolittle plan for grafting cells, and the other apparatus is simply development along lines which will help in the making up of increase and making of nuclei. The first requisite in any operation for making up artificial queens is in getting the colonies in proper shape to raise them. A great mistake made is the starting to raise cells before the colonies are in condition, and starting to make increase before the brood is in condition for making up that increase. I believe it would pay any man to wait until his colonies are in shape before he starts any manipulation with the object of raising queens. We usually wait until the colonies are strong, and until possibly there are a few starting to prepare sealed cups. These colonies are shaken off on to new combs. The brood from these colonies is distributed around the yard to other stocks —possibly two or three combs given to one, and two or three to another, and it is not always given to the weak stocks either. It is given to the medium stocks usually, and these medium stocks are built up until they have brood above, until it is necessary to put on queen excluders; and when they are in this condition I believe the yard is in good condition to start queen rearing.

The first step, of course, after the brood is in shape, is getting the cells started. The cells are grafted by the Doolittle system into prepared cell-cups. They are grafted from the best breeder in the yard, and I do not think it is necessary to go into details of this, as it has been described to often. Before the grafting is done the swarm box is used. A swarm box is simply a box made like a hive to hold three combs, and it has a cover with a slot in it to hold this stick of prepared queen cells. The bees are simply taken and shaken into this box—that is, enough bees to fill the box nicely. A frame of honey and a frame of brood is put in, one on each side. The box is left in that condition for five or six hours until the bees realize their queenlessness and are ready to accept cells. Then this grafting is done, and the grafted stock of cells is put into the box. Usually the shaking is done in the morning, the grafting is done in the afternoon, and the cells are left with the bees until the next morning. By that time those that have been accepted have been fed quite a bit of jelly, and they are then taken and put into the colony that the queen has been taken from and the frame of prepared cells is put above the queen excluder with the queen below. The frame that holds the queen cells is simply an ordinary frame fixed up so that it will fit in. It is put in the centre of the upper story of the cell-building colony. They go ahead and complete those cells and when they are ripe in about ten days' time the cells are put into nuclei. Now, by having so much brood above queen excluders in the yard, the yard is in good shape to make up the nuclei, because the brood is capped over, and there would be none lost by neglect or chilling and by taking one or two frames of this brood that has been entirely capped over in rearing above, and giving it to the nucei, we have the nuclei started. Any shaking after that can be done; and an occasional frame of this brood is put above the queen excluder and given to the nuceli and the young colony is built up in this way.—From an address by F. P. Adams, before Ontario Bee-keepers Association.

SIGNET.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Extension to breakwater, Richibucto Cape, N. B.," will be received at this office until 4.00 P. M., Wednesday, August 17, for the construction of an extension to the breakwater at Richibucto Cape, Kent County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department, at the offices of E. T. P. Shewen, Esq., District Engineer, St. John, N. B.; Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on application to the Postmaster, Richibucto, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures, stating their occupation and places of residence. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, for the sum of two thousand three hundred ($2,300.00) dollars, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

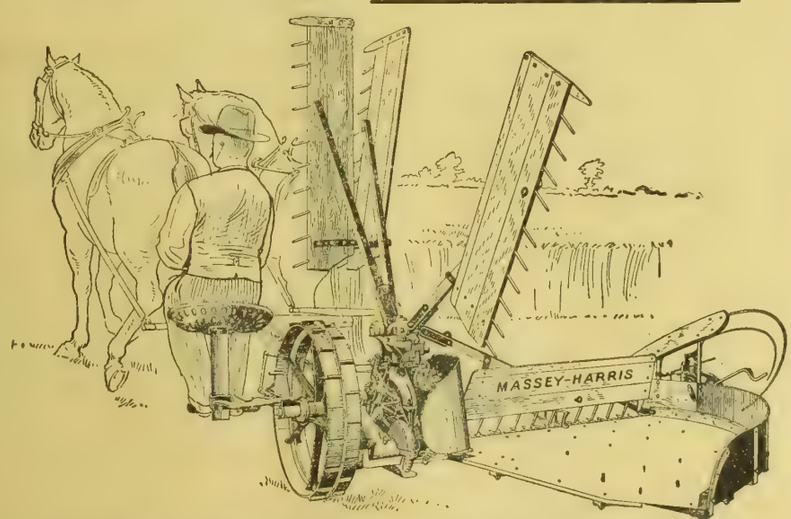
The Department does not bind itself to accept the lowest or any tender.

By Order,
R. C. DESROCHERS,
Asst. Secretary.

Department of Public Work,
Ottawa, July 16, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

Massey-Harris Reaper.



The only Reaper with a steel platform. The large drive wheel gives ample traction. Gears are well protected by shields. Will cut clean without digging into the ground. Pitman has steel strap at knife end and brass bushing at crank end. Driver has perfect control of the Rakes. Platform is easily raised and lowered. Main wheel runs on Roller Bearings. Table is easily tilted by a convenient lever. Machine can be folded for transport easily and quickly.

THE MASSEY HARRIS CO., Limited, - Moncton, N. B.

Acadia Seminary

"A First Class School for Girls and Young Women."

A Standard

To prepare for **COMPLETE LIVING.** All courses are arranged with this end in view.

An Opinion

"What impressed the writer (in the Educational Review) was the admirable system that prevails in the management in every department of work; the kindly personality and tact; the genial sympathy in the relations between teacher and pupil and the interest which each one seemed to feel in the work of the day. **AN EDUCATION UNDER SUCH CONDITIONS IS A GREAT ASSET."**

Information

The new catalogue of Acadia Seminary has just been issued. It contains full information concerning **COLLEGIATE STUDIES, MUSIC, ORATORY, ART, HOUSEHOLD SCIENCE, BUSINESS,** etc., ete. There is provided just the course you need to fit you for **complete living.** The next term opens September 7, 1910.

Write to **PRINCIPAL H. T. DeWOLFE, Wolfville, Nova Scotia.**

Acadia College

1910—1911.

21 Professors and Instructors.

Department of Arts and Sciences

Bachelor of Arts Course.
Bachelor of Science Course.

Department of Theology

Bachelor of Theology Course.
English Course.

Department of Applied Science

Engineering Course.

Calendars and other information freely supplied on application to the Deans of the different departments.

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Founded 1829.

A Residential School for Young Men.

The following courses are offered :—

Course Leading to Matriculation
General Course
Business Course

For further in formation apply to the Principal,

E. ROBINSON, B. A., Wolfville, N. S.

Description of the Buckeye Traction Ditcher.

(Continued from Page 635.)

any man of ordinary intelligence to run it successfully.

(3) That it can be operated summer and winter, and be used for other purposes than ditching, such as a traction engine to pull loads, or to furnish power to saw wood, shred corn, etc.

(4) That when equipped with a gasolin? engine, the operating expense is reduced to a minimum.—N. S. Agr., Report 1909.

More Details Wanted.

A subscriber writes :—I have a young horse that snores in head when hauled hard. Please send me a receipe that will cure or help him.

Ans.—The symptoms are too meager to permit me to diagnose the disease, as frequently there is a loud sound in breathing during an attack of strangles, in cases of catarrh as well as in roaring and in each case the treatment should materially differ. If the owner would give details such as age of animal, duration of condition, whether constant or only when drawing heavy loads, whether worse when stomach is full and if there is any cough. I might give him some assistance.

J. STANDISH, V. S.

Ophthalmia.

R. H. I., Victoria Co., N. B., Ques.—A mare, thirteen years old, is bothered with eyes running water and lids swelling. She sufferes a great deal for three or four days and then her eyes will seem to be all right for a few days. She has been this way for about six weeks and I have used hot milk and Dr. Daliel's Witch Hazel.

Ans.—The disease is Ophthalmia of which there are two kinds; simple ophthalmia , an, inflamation of the mucous membranes of the eye, and periodic ophthalmia, sometimes called moon blindness, an inflammation of most of the structures of the horse's eye ,reovering at varying periods and generally terminating in cataract and blindness.

Treatment.—Most cases are, benefited by a purgative of from six to eight drams of Barbadoes Aloes, two drams of ginger and syrup sufficient to four balls quantity to be governed by size and age of the animal. After physicking ceases, give two dram doses of potassium nitrate, at night in soft food, and easily digested food, such as wheat Bran mash and give one dram of Nux Vomica night and morning. For local treatment bathe the eye twice a day with warm water and afterwards apply a lotion composed of four drams of Sulphate of Zinc, four drams of Fluid extract of Belladonna and one pint of rain water, applying around and over the lids allowing some to run into the eye. There are many other remedies but the above is convenient, cheap and as beneficial as any.

J. STANDISH, V. S.

Ponies.

G. M. B. Newfoundland:—I want to find out the size and height of "Sable Island Ponies!" Government is importing them for breeding purposes, and il they are smaller or lighter in weight than the general Newfoundland pony. I think they are making a mistake. A large number of our ponies go to the Sydney Mines and more would go if they were a little heavier! It's a wonder if there are a large number of "Sable Island:' ponies they are not taken in preference for this work.

Ans.—A Sable Island pony, fourteen hands high weighing seven hundred pounds would be a large one. Few are over that size and the majority are below that, many very much smaller, only twelve hands and about four hundred pounds.

J. STANDISH, V.S.

Feeding Corn Meal in Addition to Pasture Fare.

W. A. M., P. E. I.,:—The article in a recent issue of your paper in regard to increase and decrease of fat in milk was an instructive one. Now I wish to know if a cow, giving milk on grass will fatten by feeding cornmeal.

Ans.—If the cow is in a thrifty condition and has all the succulent grass she can assimilate the tendency would be to for her to lay on fat or increase her yield of milk or both is she were fed corn meal in addition to her regular pasture fare.

Clover Pasture Causes Cattle to Bloat.

My neighbor has a field of common red clover he intended to use for pasture and did a short time to his sorrow, as he lost two valuable animals from bloating. Every time he turns into this field some of his cattle b,oat and he has had to tap some of his cattle to save their lives The queer part of the thing is, that the rest of his neighbors who are pasturing clover are having no trouble. Do you think it is due to the kind of clover or some disease of the clover or is it due to some disease or condition of the cattle?

D.A.T.

If the proper precautions are taken when turning cattle on clover pasture, there is very little danger of their bloating. If hungry animals are turned upon luxuriant clover pasture, especially if it is somewhat moist, there is great danger of the clover causing them to bloat. If the herd is turned in after the dew has disappeared, and permitted to graze in the beginning but an hour or two and then removed to some other field there will be very little danger of any of them bloating. It has been said by some authorities that if cattle running on clover pasture can have access to a straw pile, or an old hay stack, they will eat enough of this to prevent bloating. We have suggested a good many times that cattle running on good pasture, should have access to hay, especially night and morning, and especially is this true when the cattle are first turned to pasture. But one of the safest ways of accustoming cattle to eating red clover is to permit them to graze but a short time at first and gradually increase their grazing period as they become accustomed to the pasture.

Louden's Hay Tools

Have been in use for more than forty years. Each year the demand for them has grown until they are now used from coast to coast, and he best advertisement other makers use for heir goods is that they are

As Good as Loudens

We manage, however, to keep the lead we have always had and to manufacture the best line of Hay Tools ever offered to the Farmer.

This is one of the 13 different Hay Carriers we make.

Louden Junior Carrier for Steel Track

Write for catalogue and prices to

Louden Machinery Co., Guelph, Ont.

Manufacturers of Hay Tools, Barn Door Hangers, Feed and Litter Carriers, Cow Stalls and Stanchions, etc.

Our 1910-11 Catalogue

now in the printer's hands will show an increase in rates caused by our additional equipment and the greatly increased cost of everything we have to buy.

Those entering before the catalogue comes from the printer can claim present rates.

S. Kerr, Principal.

GET THIS CATALOGUE

SAVE MONEY

The Best Ever

issued: Guns, Rifles, Ammunition, Fishing, Tackle, Baseball, Golf, Tennis, Lacrosse, Camping Outfits, all Summer and Winter Sports. We want

Every Man

who Hunts, Fishes, or plays any Outdoor Game to get our large free Catalogue. Prices right, satisfaction guaranteed. Immense stock, prompt shipment

You save money by getting Catalogue to-day.

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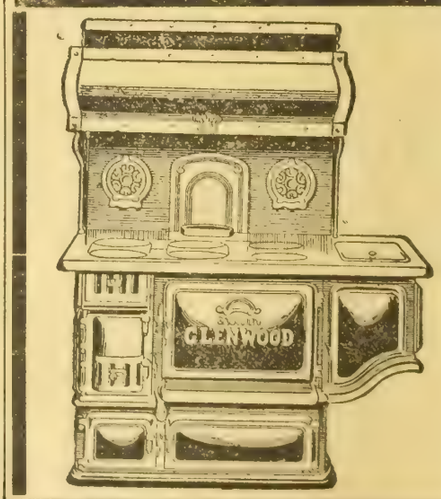
27 Notre Dame St. West, Montreal



Are You in Need of a Stove ?
If So, We Can Supply Your Wants.

Yes; if you are using an old stove that is warped and cracked or one that is burning too much wood, it will pay you to get a modern range. Our GLENWOOD RANGES will meet your demands to perfection. They are built on the most modern plans and fitted with all conveniences that we find of any use to a range. We have these Ranges in different styles and prices to suit anyone desiring to get a first class Range. We make them. We well them. They will give you satisfaction. Send for Catalogue and Prices.

McLEAN-HOLT & CO.,

Canadian Mfg. of GLENWOOD RANGES,

155 Union Street, - ST. JOHN, N. B.

Division of Territory in the Farmer-Herald Contest.

DISTRICT NO. 1—Includes the City of Halifax and all territory west and south of the Intercolonial Railway.

DISTRICT NO. 2—Includes Dartmouth & all territory east and North of Intercolonial Railway to the straits of Canso, New Brunswick and P. E. I.

DISTRICT NO 3—Includes the Islands of Cape Breton and Newfoundland.

Declining Vote Scale

Votes will be allowed on all prepaid subscriptions during the three remaining periods of this contest as follows.—The following scale will not be altered or changed and no extra offers will be made for dates.

First Period.

July 27th to August 20th.

(Club) The Halifax Herald and Maritime Farmer.

	Votes	Price by Mail
Six months	3300	$2.90
One year	6000	5.80
Two years	22000	11.60
Three years	40000	17.40
Five years	75000	29.00

(Club) The evening Mail and the Maritime Farmer outside the city of Halifax and Dartmouth.

	Votes	Price by Mail
One year	3200	$2.80
Two years	8800	5.60
Three years	18000	8.40
Five years	35000	14.00

Second Period.

August 22nd to September 3rd.

(Club) The Halifax Herald and Maritime Farmer.

	Votes	Price by Mail
Six months	3000	$2.90
One year	8000	5.80
Two years	20000	11.60
Three years	35000	17.40
Five years	70000	29.00

(Club) The Evening Mail and Marittme Farmer outside the city of Halifax and Dartmouth.

	Votes	Price by Mail
One year	2900	$2.80
Two years	7800	5.60
Three years	16000	8.40
Five years	30000	14.90

Third Period

September 5th to September 17th.

(Club) The Halifax Herald and The Maritime Farmer.

	Votes	Price by Mail
Six months	2500	$2.90
Tne year	7000	5.80
Two years	16000	11.60
Fhree years	28000	17.40
Oive years	60000	29.00

(Club) The Evening Mail and The Maritime Farmer outside the city of Halifax and Dartmouth.

	Votes	Price by Mail
One year	2400	$2.80
Two years	6800	5.60
Three years	12000	8.40
Five years	25000	14.00

New Industry Started in the Annapolis Valley.

Mr. F. A. Frazer, of Oregon Washington, United States, arrived in Kentville on Wednesday to install a Lime-Sulphur plant. A site has been purchased about a mile from Kentville on the C. V. Railway. Operations have already began. Mr. Frazer, an expert in the manufacture of this new spray material, has already installed five plants, Nova Scotia being the last to complete the chain of Lime-Salphur factories from the Pacific to the Atlantic Coast. The Nigara Spray Company have secured the services of Mr. Frazer to make next year's output. The plant will cost about $15,000.

Screen Your Doors and Windows

Do not neglect to screen doors and windows with wire in order to keep out flies and mosquitoes and the moths and bugs that fly about at night. This is a necessity, as flies are a menace to health, as well as a destroyer of comfort. If you have no frames for the windows, let the screen cover the whole opening, tacking it on the outside of the frame, then the window can be opened from top or bottom. Do this as soon as the windows are cleaned for the spring.

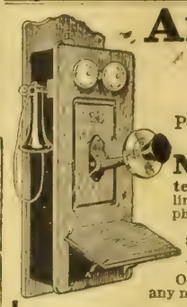
Soreness of the muscles, whether induced by violent exercise or injury, is quickly relieved by the free application of Chamberlain's Liniment. This liniment is equally valuable for musclar rheumatism and always affords quick relief. Sold by all dealers.

Clean out the Rubish.

Housewives are too prone to harbor up scraps and useless articles that will probably never be of any use, and only serve to cumber and create disorder. The housewife should nerve herself to give, throw away, or consign to a bonfire the rubbish that will never be missed except with a sensation of relief that it is gone.

The PUBLISHER'S DESK.

Manure Value and Manure Spreading.—Few farmers fully realize the amazing dollar-value of manure. Note the figures below. Then think what a profitable by-production manure is. According to carefully conducted scientific experiments, the manure from one animal for a year, has the following values: Horse, $22. to $28; Cow, $28. to $35. So it will be seen how enormous the loss is to farmers who waste the manure—or even a part of it. The best method of taking advantage of the full value of the manure is to haul it out immediately and spread it with a machine. Spreading should be done at once in order to get full value out of the liquid portion, the most valuable part of the manure. The best plan is to keep the spreader in the barnyard, where you can shovel manure into it right from the stable. Then as soon as you have a load, you can haul it out and spread it on the field where it is most valuable. And that is where machine spreading proves its many advantages. A good manure spreader distributes a fine coat of manure over every part of the field—evenly, without waste and to best advantage. You know the objections to hand spreading—the hard work, the time it takes, the wasting of valuable manure by dropping it in piles and the losing of a good part of the value of the manure by letting it lay around in a barnyard corner. Almost any manure spreader is a paying investment. The good manure spreaders pay wonderful dividends. In addition to getting full value out of the actual manure—in addition to saving an enormous amount of work and time—the even spreading insures an even stand so the crop is harvested most easily. Farmers should not overlook that important advantage of the good manure spreader. The proper use of manure, which means spreading it with a good manure spreader—has done more to increase production and decrease the cost of production than any other modern farm implement. But it's the good manure spreader only that counts. The wise farmer does not take chances. He buys the spreader that is doing excellent work for thousands of other progressive farmers throughout the land. He investigates the I. H. C. line for instance because he feels absolutely sure of getting a quality manure spreader when he chooses one of the I. H. C. machines. There's a size and style in the I. H. C. line to meet his requirements. Each style is being depended on by thousands of farmers to maintain the soil's fertility, insuring big crops. Each style is up to the high standard of excellence which marks every I. H. C. product. The materials are of the finest—woods being seasoned and carefully inspected—irons are accurately fitted. So I. H. C. spreaders are strong and durable. They do not bind or break under the hardest strains. They are exceedingly light in draft, due to the wide wheels and roller bearings. The Cloverleaf is of the endless apron type. One leaver controls the entire spreader mechanism—stopping and starting the beater and apron—and changing the feed to spread thick or thin. A vibrating rake levels the load as it comes to the beater, insuring absolutelfy even spreading. The wheels are made of oval steel-staggered spokes and flanged, wide steel tires. The Cloverleaf spreads manure in any condition as well as all other fertilizers. The parts are few—the spreader is simple, strong



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NO CHARGE for our **experts'** letters of **advice, drawings, explanations, instructions**, telling you in **any language, non-technical**, just how to build, own and operate your **rural, town** or **long distance** lines in a good but economical way and **at a profit**, thereby getting **your** own telephone **free.**

We are the **largest**, exclusive and **the only** bona-fide **independent** Telephone and Switchboard makers in **Canada** or **Great Britain.**

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We have a splendid money-making proposition for good agents.

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Agricultural College, Truro, Nova Scotia.

Next Session of Full Course Begins NOVEMBER 1st, 1909.

Next Short Course for Farmers and Farmers' Sons Begins JANUARY 3rd, 1910.

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies Begins JANUARY 4th, 1910.

Three hundred and fifty [350] students enrolled in the various classes during the past session. A large increase is expected next session.

Tuition FREE to all students from the Maritime Provinces

A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time, in English, Mathematics, Book-Keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a school education and now wish to improve their knowledge in all lines.

Students completing the two year course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges.

For full particulars apply to,—

M. CUMMING, B. A., B. S. A., - Principal Agricultural College, - Truro, N. S.

and durable and its efficiency is of the highest. Then there's the Kemp 20th Century, another I. H. C. spreader of merit. The aprons forms the bottom of the box and is of the return type. The main frame is strong and substantial enough to support all the working parts. The beater is designed so that it thoroughly pulverizes the manure before spreading. There is no cramping, twisting or binding of gears or apron It, too, is adjustable to spread light, medium or heavy—the changes are easily made and the entire spreader is so simple that a boy can run it. The front wheels are lower than the rear wheels and are set closer together. These are provisions to permit the wheels to cut under the box for short turning, to prevent deep rutting of the fields, and also to prevent tongue twisting and jolting. The Kemp 20th Century is furnished with wood or steel wheels as desired. It can be used for spreading any kind of manure or comercial fertilizer. The Corn King is still another I. H. C. spreader of high quality. The gear construction is remarkably simple—the gear teeth are deep, insuring perfect work at all times. It, too, is of the return apron type. It is instantly adjustable to spread any amount manure per acre as desired. The vibrating rake insures even spreading. The whole spreader is remarkably compact and strong. Corn King spreaders are giving satisfaction everywhere. If you are thinking of buying a manure spreader, and every farmer who hasn't one ought to be thinking along those lines—it is a good plan to see the local International dealer about the size and style that meets your requirements. I. H. C, spreaders are made in capacities from 30 to 70 bushels—for large and small operations. If you prefer, write direct to the International Harvester Company of America, Chicago, Ill., U. S. A., for any definite information you want about the spreader you are most interested in.

Of Value to Horsemen.—Do you turn your horses out to pasture. If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the house is haping a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

A Roofing that needs No Painting.—Farmers all over the country are beginning to wake up to the fact that it is no longer necessary to use ready roofings that require constant painting to keep them tight. The new style of ready roofings with a mineral surface, of which Amatite Roofing is the best known, are becoming very popular and have proven a great success.

The mineral surface of Amatite needs no painting or coating whatever, and after the roofing is laid, there is no further excuse for trouble A sample of Amatite can be secured by addressing the nearest office of the CARRITTE PATTERSON, MFG., CO., St. John, N. B., and Halifax, N. S.

Grand Trunk Bureau in London.—A part of the magnificent Headquarter's Building recently built by the Grand Trunk System on Cockspur Street, London, is to be devoted to the Bureau, through which is to be distributed information concerning Canada. The Standard of Empire calls it "A new Canadian Commercial Embassy." Above the main offices of the Grand Trunk are spacious rooms set apart for this work. Here visitors may rest and read the news of the Empire, ask questions and receive expert advice about the Dominion of Canada. Upon the walls of these rooms are splendid pictures showing the progress being made by men who are building the new nation of the north

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Improvement in Amatite Roofing.—Amatite Roofing, which has for several years been growing rapidly in popularity among our readers on account of its no-paint mineral surface, is now being made with several little improvements designed to make it easier to lay.

One of these is the smooth lap, left along the edge of the roll, about three inches wide,where the mineral surface is omitted. This smooth lap makes a closer and tighter joint possible.

The adhesive cement which is supplied with each roll now comes in liquid form and does not require heating before use.

Instead od supplying the nails and caps, the nails themselves have extra large heads, thus saving considerable bother in putting down the roofing.

Readers who are unfamiliar with Amatite Roofing should send for a sample to the nearest office of the CARRITTE PATERSON MFG, CO., St. John, N. B., and Halifax, N. S.

From "La Patrie" June 21st 1910.

The French Canadians now number two on the Directorate of the Grand Trunk Pacific. Mr. Alfred Brunet, who was named by the Government to represent it at the time was formed, and the Hon. Raoul Dandurand, who was chosen at the last meeting of the Directors. The nomination of Mr. Dandurand is welcomed with much pleasure in railway circles, where his talents and ability will be valuable in the direction of our National Transcontinental Line. We are now represented in the two great Canadian Railways as we already have Hon. Senator Forget on the Directorate of the C.P.R.

Another paragraph says:—

The Directors of the Grand Trunk Pacific have elected the Hon. Senator Dandurand one of their number. As is known, Mr. Alfred Brunet, represents the Government on the Board already. "La Patrie" rejoices sincerely in the nomination of Mr. Dundurand.

The Late Rev. Father Morriscy's Birth Anniversary.—"Halifax, July 16.—To-day is the sixty-ninth anniversary of the birth in this city of William, afterwards Rev. Father Morriscy, lovingly remembered throughout the Maritime Provinces and known across the Continent for his remarkable cures. During his thirty years' pastorate at Bartibogue N. B., his truly wonderful medical skill was at the service of all who needed help, and for his services he steadily refused pay. Thousands came to him or wrote for his advice, and his fame spread far beyond the bonds of his own parish. Since his lamented death, on March 30, 1908, his best known prescriptions (now the property of the Rev. Sisters of the Hotel Dieu) have been made up and placed on sale through the Maritime Provinces and Quebec so that in fuller measure than even during his lifetime, his good work for the sick and suffering goes right on.

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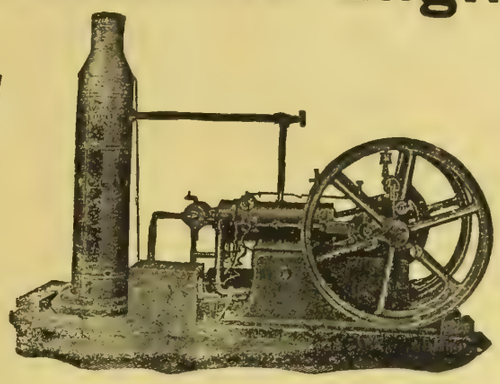

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St. John, N. B., Agents.

This Serviceable "Swiss" Army Rifle For $3.50

We have in stock about twenty of these "Swiss" Army Rifles which we would like to dispose of. Having purchased a large number of these rifles for premium purposes we necessarily got them at a bargain and are now offering them to you at wholesale prices. The shooting season is over and we do not want to carry so many in stock. They retail at all hardware stores for about $6.00 each. Ammunition for these rifles is cheap and can be obtained at almost any hardware store in the provinces. If your dealer does not keep it we can get it for you- Every farmer should have a rifle and this is your opportunity. Better send for one to-day. They will not last long at the price quoted, $3.50. Orders filled in rotation. If all are sold when your order is received money will be refunded. Order to-day. Cash must accompany order. If you send check add 25c for exchange.

The Maritime Farmer
SUSSEX, - N. B.

When writing advertisers please mention this paper.

MARKETS.

Charlottetown Prices.

Grain.—Oats 38c. to 43c.

Feedstuffs—(Retail)—Bran $1.20 to $1.25; Shorts $1.30 to $1.40; Middlings $1.35 to $1.40; Oil-Cakes $2.25; Corn Meal $1.75 to $1.80.

Live Stock.—Butcher's cattle (fat) 5c. to 6c.; Stockers (grass fed) 4c. to 4½c.; Milch Cows $35.00 to $55.00; Sheep 3½ to 4c.; Lambs $2.75 to $3.50 Young Pigs $6.00 to $8.00 per pair.

Dressed Meats.—Beef (Carcass) 9c. to 12c.; Mutton (Carcass) 8½ to 9½c; Veal (Carcass) 4½ to 6c.; Lamb (Carcass) 12½ to 15c.; Pork none offering.

Horses.—Drafters $100. to $250.; Roadsters $100. to $225; Carriage $150. to 225.

Dairy Products.—Creamery Butter 22c. to 23c. solids, 22½ to 23½c., prints; Dairy Butter solid 17c. to 19c; Cheese 10 13-16 to 10 ⅞c.

Poultry and Poultry Products.—Eggs 15c to 15½c; Fowl 11 to 12c; Chickens 60 to 75c a pair.

Fruit.—Strawberries 3 boxes for 25c.

Vegetables.—(Retail)—Carrots new, 5c., per bunch; Potatoes (wholesale) 40 to 45c; Beets (new) 5c., per bunch retail.

Miscellaneous.—Hay $9.00 to $10.00; Straw $6.00; Wool 23c. cash 25c. Trade; Beef Hides 8c.; Calf Skins 10 to 12c.; Sheep Skins 35 to 50c.; Lamb skins 15 to 25c.

MARKET REVIEW AND FORECASTS.

Haying is now in full swing and farmers are busy, besides there is not much farm produce left in the farmers hands and markets are consequently poorly supplied in hay, oats and potatoes. Strawberries have been quite plentiful and were retailed last week at 4 boxes for 25c., but the supply is now limited and prices are higher and another week or ten days and the crop will be all over. Other fruits will then be coming on to take their place. Crops are growing fine and there is every prospect of heavy yield in all lines. The hay crop is very heavy and so far is being stored in good shape. The hay market is easier and about $9.50 is the limit of price paid by shippers. Oats in sympathy with advance in the West are firmer but there does not seem to be many for sale. Potatoes are also pretty well cleaned up and the market being bare of supplies the price is gradually advancing and 40 to 45c., is being paid for them in a small way, mostly for retail trade. Creamery butter is still firm and meets with fairly ready sale at prices within our quotations. Dairy Butter is dull and there is more offering than the market will take care of and it is being stored for use later in the season. This was cheese board day and the quantity boarded was not as large as expected owing no doubt to the absence of some of the salesmen. The highest price paid was 10⅞ at which price about 200 boxes were sold, about 1000 boxes sold at 10 13-16 balance refused to sell at that but would likely sell afterward. Beef is firm but there will be a lot of grass fed cattle ready shortly and prices are likely to be easier.

Charlottetown, July 22, 1910.

Halifax Prices.

The market on the whole is very interesting just now. Flour has scored almost sensational advances, the situation now being quite extraordinary for this time of year. Oats are much higher, and rolled oats are higher also. Beef has also scored another advance at packing points. Pork is a little easier and lard a half cent lower. Collections are fair and the wholesale trade report that they are not disturbed more than ordinarily by failures in the grocery trade. Everyone anticipates a good summer and fall trade.

BREADSTUFFS AND FEEDS.

Rather startling developments have taken place in the wheat and flour markets—developments that a few weeks ago were hardly expected. The crop damage reports have been instrumental in causing a total advancement in wheat and as it requires about five bushels of wheat to produce a barrel of flour, this is equivalent to an advance of about a dollar a barrel in flour. The mills have not put up their prices so much, but the advance in the past fortnight is almost 50 cents a barrel. The jobbing trade meantime have not put up their prices to such an extent. It will probably be a matter of only a few days though until further advances are made by jobbers to bring prices more into line with mill prices. Jobbers are thus able to give better values just now than could be had at the mills. Advices from the Upper ing in flour. The large millers are Provinces indicate a very strong feelsaid to be looking for further advances if the wheat market continues as firm as it is at present. Most of the Ontario millers of winter patents are closed down, waiting for the new wheat crop. There has been some demand from Europe and a fair amount of export business has been done at good prices.

Oats have advanced several cents during the past fortnight. Reports are to the effect that in some sections of the Dominion the farmers will not have enough oats for their own use. The prices are likely to be higher for a time. This of course involves an advance in rolled oats and oatmeal, which are really lower locally than they can be bought for at first hands today. The millers about a week ago put up the price 20 cents a barrel in sympathy with the advance in the raw material, and it is said that a further advance is in prospect if the price of oats is maintained.

Feeds are firmer in sympathy with wheat and flour, but no material advance has yet been made here in the jobbing prices, though the mills are charging from one to two dollars more per ton on bran and middlings. The development of considerable export business in bran has further contributed to a firm feeling. Ontario bran is very scarce owing to most mills being closed down. Corn having advanced the price of cornmeal is affected and the situation in this commodity is now very bullish. The prospect of a good hay crop is inducing those who have old crop left to bring it forward for disposal.

Flour.—$5.00 to $6.55.

Beans.— $2.05 to 2.20.

Peas.—$4.75 to 5.75.

Oatmeal, Standard, in bbls, $5.05 to $5.15; Oatmeal, Standard, in bags $4.90 to $5.00; Rolled Oats, in bbls, $4.55 to $4.65; Rolled Oats, in bags, $4.35 to $4.45; Middlings, $25. to $26.00; Bran, $21.50 to $22.00; Shorts, $24.00 to $25.00; Feed Flour, bag 98 lbs, $1.70 to $1.75; Cornmeal, in barrels, $3.20 to $3.30; Cornmeal in bags $1.55 to $1.60; Feed Oats, bulk .49 to .50; Feed Oats, in bags, .52 to 53c.; Hay, $12.00 to $14.00.

PROVISIONS.

A surprising thing about the trade in provisions is the fact that in spite of the high price there has been considerable enquiry of late. Beef has advanced again and packers are now charging 50 cents a barrel more. The situation in pork products now seems to be changing somewhat; at least pork is easier than it was a fortnight ago and lard is costing ½ cent a pound less at packing points. There is a fairly active demand just now for hams and bacon. As is pointed out elsewhere, the warm weather, making it difficult for many country people to get fresh meat, has caused an increased demand for smoked meats. The future of pork products depends largely upon the hog supply. There has been some increase in this, but perhaps not enough to make any appreciable difference in barrelled pork. The world's supply of hogs is very much restricted and it will take some time to get it back to normal again.

Pork.—American Clear Fat Backs, $30.50; P. E. I. Mess, $29.00; P. E. I. Short Cut Backs, $29.50; American Bean, $29.00; Rumps, none; Jowls, $15.00; Pigs Feet, $6.50; Hams $18.00 to $19.00; Roll Bacon, .16; Side Bacon, .20; Lard in Pails, 17; Lard in cases, .18c.

Beef.—American, $22.00; Best Canadian, $21.00; ½ Bbls Pork and Beef, 50c extra.

BUTTER, CHEESE AND EGGS.

The jobbing trade in butter locally is very dull at present, as there is an unusually large supply of butter coming in direct to the grocers from nearby points. The unusually good grass conditions are the cause of the plentiful supply. There is a large supply of local creamery coming on the market, but this is being absorbed through the regular channels. The markets generally are steady in tone, the belief being that we will not see much if any lower prices this year. The supply of eggs from nearby points is much less in quantity than at any time for the past few months and shipments from Prince Edward Island are not commencing to find their way to this market.

Creamery Prints, 26c.; Creamery, Solids, 25c.; Dairy, solids, 22c; Dairy rolls, 21c.; Cheese, Twins 12½c.; Cheese, Large 12c., New Laid Eggs, 19 per dozen.

FRESH FRUITS AND VEGETABLES.

The strawberry season now ending, the trade turn their attention to other fruits, such as raspberries, which are now quoted at 12 cents a box and native cherries, which are selling at 15 cents. American apples are now on the market and are offered at $1.80 a basket. Potatoes are again higher and now all varieties of stored potatoes are selling at $1.50 a bag. The tendency is for fresh vegetables especially to become cheaper, and in many lines of fruits more favorable prices are obtainable too.

Potatoes.—Nova Scotia, per bag, $1.50; New Brunswick, per bag $1.50; P. E. Island, per bag, $1.50; Rhubarb native, per lb, .02; Tomatoes per crate, 20 lbs, $2.00; Lettuce, per doz heads, .50; Asparagus, per doz. bunches $3.00; Strawberries, per box, 8c. to 10c; Cucumbers, each .05c; Peaches, per cwt, $1.50; Plums, per cwt., $2.25; Cabbage, per barrel $1.90 to $2.00; Apricots, per cwt. $2.00; New Turnips, per doz, 60c New Beets, per doz 70c; New Carrots per doz, 70c; Native Cherries, 15c. Cauliflower, per doz, $1.00; Raspberries, .12; Apples, per basket, $1.80.

FRESH MEATS AND POULTRY.

The supply and demand just about balance one another in this department. Lamb is a little more plentiful and very good in quality; but as carcasses are larger in size as well as more plentiful in number, the price is dropping some. The beef market is a little easier, though not a great deal. Just now, of course, the demand is for the lighter meats. Poultry is in request to some extent with moderate supplies to draw upon.

Fowls, per lb, 13c; Turkey (fresh killed) per lb 17 to 18c; Lamb, (cold storage) none; Spring Lamb, per lb, 14c; Spring chickens, per pair 70 cents, to $1.00; Geese, none; Ducks, per lb 15 to 17c; Beef, per lb, 9 to 10c, Mutton, per lb 6½ to 7c; Veal, per lb, 6½ to 7; Pork, 10 to 11.

Halifax, N. S., July 19, 1910.

St. John Prices.

The general condition of trade continues to be satisfactory, although of course the Campbellton fire has considerably effected business with the section for which it is so large a distributing centre. Several St. John houses had warehouses in Campbellton, and many wholesale merchants had business relations with the town and surrounding country. Of course the limber industry of the Restigouche is affected by the destruction of so many mills. It is expected that these will be rebuilt. The lumber industry in other parts of the province is active, and shipments are steadily going forward to trans-Atlantic and United States ports.

Except that flour has sharply advanced and lard is easier, there is no change in market quotations.

Flour and Meal.—There has been another notable advance in flour. Hard wheat patents, $6.85 to $6.90; choice patents, $6.10 to $6.15; medium patents, $5.95 to $6; oatmeal, $4.75 to $4.80; cornmeal, $3.

Provisions.—Lard is easier. There is no other change. Domestic mess pork, $29 to $29.50; Lumbermen's XXX, $15.50 to $16; lard, tub base 16½c.; compound, 13½ to 13¾c.

Beans.— The price is steady at $2.20 to $2.30.

Produce.—Cheese is easier at 12c to 12¼c.; butter steady at 17c. to 19c.; and eggs firmer at 17c. to 18c for case stock.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex N. B.

WANTED.—Hides calfskins, sheep and lamb pelts. J. J McLEAN & SONS Hopewell N. S.

SHORTHORN BULLS for sale. WALTER EATON, Upper Canaid, Kings N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

SHORTHORN BULL 21 months old for sale at a bargain. Write me for price or better come and see him. HAROLD ETTER, Westmorland Point. . B

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

DAIRY AND STOCK FARM FOR SALE.—Three miles from Sussex, 300 acres, 200 acres under cultivation, large intervale cuts 80 tons hay. Good two-story house heated by furnace, water pumped by windmill, good barn.—HARVEY B. PARLEE, Sussex, N. B.

THREAD POWER FOR SALE.—One second hand two-horse Moody thread power for sale cheap. First set of planks still on the machine. Write POWER care of MARITIME FARMER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

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It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 15, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

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AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., August 9, 1910. Number 21.

Striking Illustrations of the Value of Underdrainage

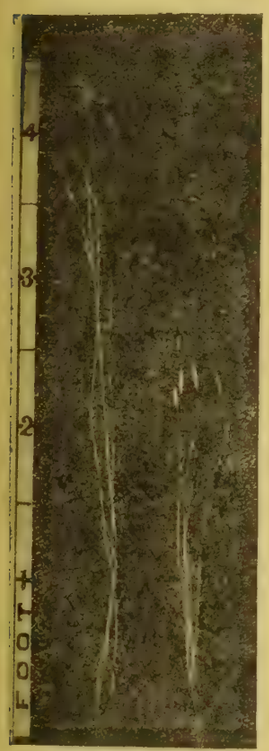

Figure I.
Fall Wheat on Drained and on Undrained Land.

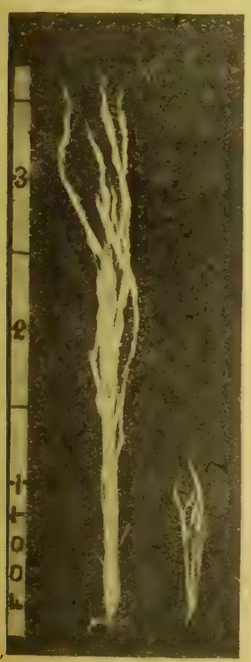

Figure II.
Corn on Drained and on Undrained Land.

IN our issue of June 28th, we published a number of quotations from letters received by Prof. W. H. Day, of the Ontario Agricultural College, in response to a circular letter sent to practical farmers, asking for expressions of opinion re underdrainage. These quotations appeared in the 1909 Annual Report of the Nova Scotia Department of Agriculture, and, with a single exception, all those who expressed an opinion, men who had practical experience in underdrainage and who had carefully watched for results, favored underdrainage as a profit producing operation.

In regard to "Difference in Dates of Seeding," Prof. Day says: "Twenty-six of our correspondents gave us the difference in dates of seeding their drained and undrained land. A summary of their reports is given in the following table:

TABLE I, SHOWING DIFFERENCE IN DATES OF SEEDING DRAINED AND UNDRAINED LAND, AS REPORTED BY TWENTY-SIX FARMERS WHO HAVE DRAINED.

Difference in Seeding Time.	No. Reporting each Difference	Per cent
1 to 2 weeks....	5 out of 26	19.2
2 to 3 weeks....	4 out of 26	15.4
3 weeks or over	17 out of 26	65.4
4 weeks or over	13 out of 26	50.0
5 weeks or over	6 out of 26	30.8
6 weeks or over	6 out of 25	23.1
A whole season	4 out of 26	15.4

It is worthy of note that the great majority reported a gain of three weeks or over. This alone is sufficient in many cases to make the difference between a good and a poor crop.

The figures in Table No. 2 are not averages, but reports of one particular crop in each case, usually the first after the drains were put in. These men are anxious to learn if "underdrains pay," and so went to some trouble to ascertain the yields per acre of the first crop. Only a few mentioned the straw at all, but those who did had about twice as much from their drained as from their undrained land. After the first season it became an old story to see these fields producing bumper crops, and in only a few cases were later records kept. These few show that the advantage of the drained land continues without interruption.

DIFFERENCE IN GROWING CROPS.

Many of those who reported had just this spring sowed their first crop on drained land, and so were unable to give any results as to yield. These and others were asked to select average samples of growing grain from their drained and undrained fields and send them to us. They were photographed and mounted for preservation. Since harvest we again wrote the senders of samples, asking them to report on the yield of the fields, from which they were chosen.

Figure III.
Oats on Drained and on Undrained Land, sent by Mr. John McIntaggert, Brechin, Ontario.

Figure I. shows two samples of fall wheat sent by Mr. R. H. McCurdy, Vienna, Elgin Co. He says: "The tall sample, four and a half feet high, is from drained land, which would grow only swamp grass before being drained; the short one, two and a half feet, is from undrained land Both were sowed on September 14th, 1908, and pulled on July 3rd, 1909. Water-furrows were run through the undrained land." Reporting on the yield in September, Mr. McCurdy says the crop on the drained land yielded thirty bushels and that on the undrained only half as much. The straw, too, was in about the same ratio, as may be seen from the cut.

Figure II. shows samples of corn also sent by Mr. McCurdy. That on the drained land was planted May 20th, and that on undrained June 9th. Both samples

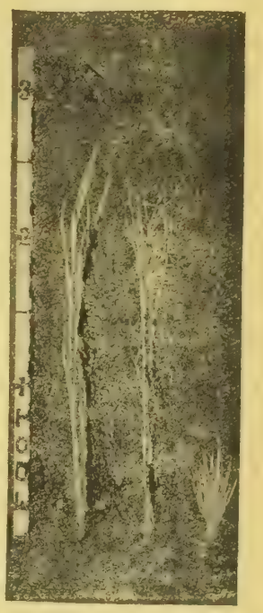

Figure IV.
Barley and Wild Goose Wheat. Samples by Mr. John McIntaggert, Brechin, Ontario.

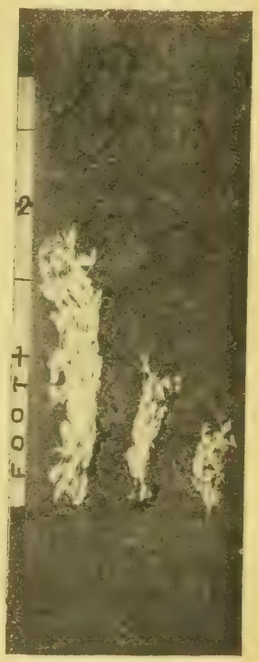

Figure V.
Peas from Drained and Undrained Land. Samples sent by Mr. Peter W. Scott, Belgrave, Huron Co.

TABLE II.—DIFFERENCE IN YIELD.

GRAIN.	DIFFERENCE IN YIELD. Drained.	Undrained.	Difference.	Persons reporting.
Corn	.....	.....	33 to 50 %	James Martin, Amherstburg, and several others
Peas	25 %	15 %	10 "	Peter W. Scott, Belgrave.
Oats	80 "	45 "	35 "	James Marshall, Hamilton.
Oats	50 "	31 "	19 "	John McIntaggert, Brechin.
Oats	35 "	0 "	35 "	William Bell, Washago.
Oats	50 "	10 "	40 "	Peter W. Scott, Belgrave.
Oats	40 to 100 "	0 "	40 to 100 "	J. H. Clare, Chapman.
Oats	50 "	35 "	15 "	J. E. Tovey, Perth.
Fall wheat	45 "	25 "	20 "	James Marshall, Hamilton.
Fall wheat	45 "	25 "	20 "	James Clayton, Cedar Springs.
Fall wheat	.....	.....	30 "	R. H McCurdy, Vienna.
Spring wheat.	25 "	15 "	10 "	John McIntaggert, Brechin.
Barley	40 "	25 "	15 "	John A. McMahen, Petrolea.
Barley	.....	.....	20 "	Joseph Lapp, Cedar Grove.
Barley	50 "	30 "	20 "	John McIntaggert, Brechin.
Barley	30 to 50 "	0 "	30 to 50 "	J. H. Clare, Chapman.
Beans	38 "	3 "	35 "	James Clayton, Cedar Springs.
Hay	2 to 3 tons	0 "	2 to 3 tons	J. H. Clare, Chapman.
Straw	.....	.....	About doubled.	Several correspondents.

were taken July 3rd.

Figure III. shows three samples of oats, number one, two and a half feet high, from low, flat, heavy clay sod, drained, and fall-plowed; number two, half as high as No. one viz; one foot three inches from high loamy, undrained sod, spring plowed and number three, one foot high, from high, loamy, undrained sod, fall ploughed. Mr. McIntaggert, in commenting on the samples says: "Other years I was unable to work the low land till the last of seeding, but I drained it last fall, and this year it was the first land I could work. I sowed it on May 13th, while the high piece from which sample two was taken was not sowed till May 26th, and the other piece on June 1st."

Figure IV. shows barley and wild goose wheat from low, flat, heavy clay, drained and fall plowed, and barley, from same kind of land undrained, and summer fallowed last year, lying right across the fence from the field, which gave sample No. 1. No. I. was sowed on May 13th, No. II. on May 19th, and No. III. on May 28th.

On October 18th, Mr. McIntaggert, reporting on the yields said: "June was very dry here, and July showery, favoring the late sown crops, for the early ones were too far advanced to benefit by the July showers; still my oats on drained land yielded fifty bushels per acre, and those on the undrained thirty-one. As for the straw, there was not such a difference, both lands averaging about two-thirds of a ton per acre. My spring wheat on drained land was good, yielding twenty-five bushels per acre, and a ton of straw, while that on undrained land yielded fifteen bushels per acre and about two-thirds of a ton of straw. Barley on drained land yielded fifty bushels per acre, and nearly a ton of straw, that oo undrained thirty bushels, and half a ton of straw. My crop on the drained land looked so promising that I ordered another car-load of tile and put it in this summer, so that now I have all the wet, flat part of my farm draineh."

Sample No. 1, Figure V., peas one foot nine inches high, land drained and manured; sowed May 5th. No. 2, land drained but not manured, sowed May 5th, eleven inches high. No. 3, from land not drained, sowed April 27th, seven inches high. The dates are worthy of note in this case, as the peas on the undrained were sowed a week and a half earlier than those on the drained, still the latter were much ahead on June 28th, when the samples were taken. Mr. Scott says there were twice as many plants on the drained as on the undrained. Reporting on yield, October 13th, he says: "On drained land the yield was twenty-five bushels of grain, and one and a half tons of straw; on undrained fifteen bushels and one ton. The manured land gave the same yield of grain as the unmanured, but almost twice as much straw. The oats on drained land, of which I sent you a sample yielded fifty bushels and one and three-quarters tons straw, but those on the undrained gave only ten bushels, and half ton of straw."

DIFFERENCE IN FRUIT TREES ON DRAINED AND UNDRAINED LAND.

The foregoing illustrations show in a very striking manner the superiority of grain crops grown on drained land. The difference in fruit trees is even more marked. In the Niagara district two weeks ago, I examined a peach orchard planted in 1905, through which a broad flat extended. On either side of the flat the trees were large and thrifty, about ten to fifteen feet, in height I should say. In the flat, twelve rows were lacking, and small pear trees filled the places. In the lowest part some of these were dying. The owner told me that the whole flat had been planted to peach trees at the same time as the higher land, but that every tree in the low land had died. One or two tile drains would have made the flat produce just as good trees as the knolls did.

UNDERDRAINAGE AS AN INVESTMENT.

Drainage as an investment has been touched indirectly in the quotations already given. Some have stated that their drains paid for themselves in one year, some in two years. Even where the drains were put less than two rods apart, and the cost ran up to $40 an acre, they paid for themselves in two crops. Has the farmer any other place where he can invest his money and have the principal returned to him every year, or every two years?

DRAINED LAND EASIER TO WORK.

Aside entirely from the increase in the crops, there are other matters that must enter into the consideration of the drainage as an investment. For instance, drained land is more easily worked than undrained. All soils contain a certain amount of cementing materials, and the closer together the particles are the more strongly the cements act, just as a postage stamp pressed tightly to the envelope adheres more firmly than one put on loosely. Undrained soil is much more compact than the drained, and therefore its particles are more firmly cemented together; hence when it dries it bakes, so that it is almost impossible to plough it, and even if it can be plowed, it breaks up in lumps that defy the harrow, disc and cultivator, and sometimes even the roller, so that whether wet or dry it is stiff, stubborn, and hard to till. Drained land, however, whether naturally , or artificially drained, is the very opposite; it is but loosely cemented, does not bake, and crumbles readily into a fine seed bed under even a light implement like the harrow. During seeding time when even hours are precious this is a very important consideration, for tillage costs money.

DRAINED LAND IS EASIER ON MACHINERY.

Then again, the old-time, deep water furrow is unnecessary on drained land, and the implements, instead of trundling over lumpy, hard-baked earth, and every now and then dropping into one of these nerve straining, body bruising, machine racking furrows, and almost stopped at every drop, move steadily forward on smooth ground that is soft and yielding. As a horse will last longer on a soft clay road than on the hard city streets, so will machinery last longer on drained than on undrained land.

Now, if underdrainage will move the seeding time ahead three or four weeks; if it will lessen the labor of tillage by a half; if it will give barley, peas, oats and corn twice as high and twice as thick on the ground the first week in July as on undrained land on the same farm at the same date, and under the same tillage; if it will give fruit trees where otherwise they would not grow; if it will double the yield of grain, straw and hay; if it will make every acre that is drained produce $20 more annually than before; if it will repay the cost of drainage every year, or two years at the most—all of which these men say it has done for them—if it will do these things. then is it not high time that underdrainage became a general practice in all the flat, wet parts of the country, as general forsooth, as the practice of tillage.

Clover Hay.

In writing this artice the fact that little clear clover is raised— the usual method being to sow clover and timothy mixed—has been held in mind. However, the first crop is usually so largely clover that the farmer will usually secure the best results by taking the clover at the right time, paying little attention to the stage of maturity of the small amount of timothy present.

THE PROPER STAGE TO CUT.

The proper stage of development of the clover plant to begin cutting for hay depends upon the variety of clover grown.

Mammoth Red Clover, the large, coarse stemmed, kind, does not blossom as early as Medium Red Clover, and produces its heaviest yield of seed in the first crop. Medium Red Clover, the smaller variety, blossoms earlier than Mammoth clover and produces the largest amount of seed in the second crop. If Medium Red Clover is grown and the farmer wishes to secure two crops of hays with as large a yield as possible the first crop may be cut somewhat earlier than if but one crop is figured on. Under this plan the yield of the first crop will be somewhat smaller and the hay will be a little more difficult to cure since it will contain a high percentage of moisture. However, the larger yield of the second crop will usually more than balance this off and the second crop usually makes a better feed than the first crop. If only one crop is figured on with a second crop if the season is favorable, probably the best time to start cutting is when about one-third of the heads are beginning to turn brown. At this stage in the development of the plant the largest weight of palatable and nutritious hay will be secured. Of course, if a large amount is to be cut, operations will have to be started earlier in order to get the field finished before the last part gets too far along to make good palatable hay.

AVERAGE YIELD OF HAY AND [illegible] OF THE CLOVER PLANT CUT AT VARIOUS STAGES.

	Yield Fresh Substance	Protein	ether extract	Crude Fiber	Nitrogen Free Extract	Ash
Clover full bloom	3722	411	158	671	1269	212
Clover (some heads dead to nearly out of bloom	3417	366	116	888	1183	192

The above figures compiled from results obtained from three experiment stations show that the largest yields of green matter containing more of all of the valuable nutrients with less crude fiber which makes hay strawy and unpalatable were secured from the earlier cuttings.

TIME OF DAY TO CUT.

Clover may either be cut late in the afternoon when it will wilt little and consequently be little harmed by the dew which will accumulate largely on the upper surface of the swath. This dew dries off quickly in the morning. The other method is to cut after the dew is off in the morning. Cutting in the late afternoon gets the curing process along more rapidly next day usually but the method used must be chosen to suit local conditions as must also the method of handling after.

CURING THE HAY.

There are two general methods of curing. One is to rake the partly cured hay in the afternoon and put it into good sized cocks built narrow and rather high. The hay is allowed to stand in the cocks for some time to finish curing. More clover is cut and put into cocks each day until some is sufficiently cured to be hauled in. The cocks are opened up and, if necessary, allowed to dry a short time and are then hauled in. In good dry weather this method is frequently modified in that instead of putting in large cocks, the hay is loaded from the windrow and put in stacks or barn immediately. The other method is to allow the hay to become sufficiently dry to load from the swath or from a windrow made by the side-delivery rake, with the hay loader. The first method has the advantage in that in the cocks the leaves and stems dry at about the same rate which prevents the leaves from falling off and being lost. This is an important matter since the leaves form the more palatable and nourishing part of clover hay and their loss in handling causes serious deterioration in feeding value. It has the further advantage in that hauling may proceed in a short time even though a heavy dew or light rain does fall. It has the disadvantage of requiring much hand labor. By following the second method hay may be put up more economically during favorable weather on account of the use of labor saving machinery. The disadvantages of this method are that a heavy dew or even a light rain causes a deterioration in the feeding value of the hay and stops hauling-in operations until the hay is again sufficiently dry to proceed. Also each time the hay becomes wet and dry again the leaves dry more quickly than the stems and more leaves are lost, with a consequent loss in feeding value. The following table taken from Henry's Feed & Feeding, shows the results of one analysis of good clover hay as compared with one rained upon.

Water	16.	16.
Protein	14.6	15.8
Crude fibre	25.3	37.4
Nitrogen free and other extracts	36.1	23.4
Ash	8.	7.5

Although this table gives the result of but one analysis it shows that clover hay that has been rained upon has lost a large per cent. of the nitrogen free and other extracts with a consequent gain of crude fiber. This change makes the hay unpalatable and lower in nutritive value.

LOADING HAY.

If clover hay is unloaded with a single or double harpoon hay fork, forkfulls will be obtained much easier if either the front half or the back half of the load is put on first just about what will make a good hayfork full. Then load the other half using care not to lap the hay in the middle. In unloading, the load parts easily in the middle giving better sized fork loads with less strain on the horses that are operating the hayfork in pulling the load apart. Loading this way seems some bother at first but it is no harder than the other way and the unloading goes much more rapidly.

STORING CLOVER HAY.

Clover hay may be put up in compact stacks or in large, tight mows while it contains a larger per cent. of moisture than if stored in loose stacks or in small mows where it is not well compacted. If put up in a partly green condition, however, it will not retain its bright color, but changes to a dark brown. This change in color usually lowers its selling value on the market, but does not injure its feeding value unless put in, in so green a condition that it becomes musty. Care should be exercised in putting partly cured hay in the barns on account of reported instances of spontaneous combustion.

COST OF PRODUCING CLOVER AND TIMOTHY HAY MIXED.

The following figures were gathered at Northfield, Minnesota, and are reported in Bulletin 73, Bureau of Statistics.

The cost of two crops including land rental at $3.50 per acre, is given as $7.17. Figuring on an average yield of 3 tons per acre this makes the cost of mixed hay on the farm $2.39 per ton. The feeding value of this mixed hay is estimated by Professor Haecker at $6.35 as compared with timothy hay at $6.00 per ton.

Some Words of Cheer From Charlotte County.

We take pleasure in presenting to readers of this issue of the Maritime Farmer, two photographs taken from scenes on Elm Grove Farm, steading of Mr. Edwell E. Emerson, who resides in the little village of Greenock, about 14 miles from the town of St. Stephen, Charlotte County, N. B.

One has only to look at the well kept stock and buildings on Elm Grove Farm in order to see that Mr. Emerson is a firm believer in the opportunities offered by the East. A short time ago we wrote Mr. Emerson re the agricultural prospects in Charlotte County. In his reply, he shows that what he himself has done in the line of farming in his county another can do likewise.

His letter reads in part as follows. We frequently hear some of our would-be farmers say: the larms of Charlotte County are going back," or, in other words, "are getting run out" and "farming does not pay." I do not think these statements are correct and my reasons for thinking so I deduct from my own practical experience as a farmer in this county.

When I bought my farm, twenty years ago, it was in a pretty poor or so-called run out condition. The winter before I bought it, it would only winter five head of cattle and one horse. The acerage has not been increased but we have tried to improve our conditions so that now we keep twenty-four head of cattle some sheep, pigs and two horses. I have never bought over five tons of hay since I bought the farm and I have sold very little hay off of it.

We are following a system of mixed farming, growing as much feed as we can, feeding everything on the farm to twelve milch cows, some pigs, sheep and about twenty hens.

I believe a farmer should keep a little of all kinds of live stock and keep at it not only when prices are good but stick to it also in the season of low prices. Too many farmers are inclined to rush into a line of farming or stock raising when prices are good and in this way overdo the matter and when prices go down they go out of the business. In this way they lose the profits that come to those who stick by an industry through thick and thin. It is the farmer who remains with the job who is going to succeed. I did not know a great deal about farming when I started but I am constantly learning something along my line of work. I make mistakes at times but I try not to repeat them. Charlotte County is good enough for me and I am fully convinced that if we pay the proper attention to our farms in this county, we can make a good living and have a little to lay by for a rainy day."

We will at some future time get from Mr. Emerson an account of how he built up his worn out farm. In the meantime our readers will appreciate his optimistic spirit. May his shadow never grow less. We need more boosters and fewer knockers in order to bring Maritime Canada to that position of pre-eminence in agricultural lines that is warranted by her geographical position, her industrial opportunities, and her intelligent citizens.

Ventilation of Cow Stables.

We notice that with a great many farmers they object to putting the King system of ventilation in their cow stables because of certain objections that present themselves. For instance one farmer said to us "It is all very well to talk about changing the air every hour in the stable as you do, but how are you going to do it in cold weather without reducing the temperature too low for the cows to give milk profitably?"

That would be a sound objection if true. It can be answered however, in this way: In our own stables the mercury never goes below 50 degrees or 60 degrees even in the coldest weather. Cows will give milk readily in this temperature. How is it done? In this way: Build the stable walls of wood and paper, not stone. If built of stone or brick make three walls, or two dead air chambers.

In building of wood follow this plan: The outside row of studding is 2x4's. On the inside edges tack on heavy building paper. Then nail a 2x2 inch stud on each 2x4, and cover again with paper. Now you have two dead air spaces one four inches thick, and the other two inches. Nail on another 2x2 in same manner as before, and cover this with paper. Now you have three air spaces. Then cover the inside of the stable with matched boards, leaving the top board to be nailed afterward. You have now a stable wall eight inches thick with three air spaces, a most complete insulation against outside cold.

When you put in the intake air registers, follow this plan: Use 8x10 or 10x12 registers. Set the outside ones—one for every two cows,— in the drop siding about two feet above the sill, midway between the 2x4 studding; this makes a good flue for the pure air to flow up into the stable. Then go on the inside and cut out the layers of paper in each of the studding spaces where you have inserted intake registers outside. That will let the pure air up and into the stable at the top of the room. Now tack the top board of the inside lining in place and cut out a space for the inside register, which has an open and shut contrivance.

The pure, cold air will constantly rise and flow into the room through the warm air at the top of the stable; but the warm air being lighter cannot flow out and down to the outside register. This arrangement of the walls and air registers makes a room where you can control the incoming and outgoing of the stable air, hold its warmth, which is supplied by the bodies of the cows, and have a constant change of air.

Of course the outflow of air is governed by the big flues that take the foul air from off the stable floor and discharge it, say, four feet above the ridge of the barn. These flues should have a capacity of about two feet square for every twenty animals in the stable and should be absolutely air tight from bottom to top or else their draft will be seriously diminished. With stable walls and ventilation fixtures constructed as we have indicated, the farmer can have a warm stable room and a constant supply of fresh, pure air.

One thing more, insert a window, 2x3 feet in size for every two cows. Face the cows out so they will get the fresh air and you have a stable your cattle will call blessed and they will show their appreciation by a largely increased flow of milk because they are healthy and vigorous.

Elm Grove Farm.
Home of Edwell E. Emerson, Greenock, Charlotte, Co., N. B.

Some Elm Grove Farm Dairy Cattle.
Owned by Edwell E. Emerson, Elm Grove Farm, Greenock, N. B.

Finest Cattle Sheds in America.

"I have travelled all over this continent, and have religiously inspected all the live stock accommodations at the principal fairs, and have no hesitancy in complimenting the Dominion Exhibition Executive in St. John New Brunswick, upon having the most thoroughly up-to-date and luxurious accommodations for animals I have ever seen." This strong statement was made by a well-known cattle breeding authority in one of the Maritime Provincial newspapers a short time ago after a visit to the completed buildings on the St. John grounds where the Dominion Exhibition for 1910 is to be held from September 5th to 15th. The cattle accommodations referred to include one gigantic sloping cattle shed, in which 500 head can be accommodated — affording visitors a comprehensive view of this department at a glance. The long commodious stalls are fitted with patent troughs, fresh water faucets, special ventilation, brilliant lighting and natural drainage. The sheep pens, piggery, horse boxes and poultry houses are alike new and modern. The architectural designs for these structures were made from the best cattle accommodations heretofore standing, with special facilities made possible by the sloping condition of the St. John grounds. The safety and cleanliness of the animals and the convenience of sight-seers have been kept in mind throughout the erection of these buildings.

Hay Should be Cured with Hay Caps.

We would like to know what the advantages are by using the hay caps on mixed clover and timothy hay, providing we have sunshine to cure it. Of course, that is simply a chance but what we want to know is whether if this hay is cured and put in the barn inside of three days from the time it is cut, with sunshine all the while, the hay would be just as good as if it had been capped and why? Kindly advise and oblige.

The B. O. Co.

It should be remembered that the curing of hay is not simply a driving process. When hay is exposed to the sun, much of its nutritious properties are lost; just what we cannot say. For instance, grass cut in the pasture where the cows are grazing, is tender and juicy; when dried in the sun and the same amount of this dry feed given to the cow as of the succulent grass, she will not produce as much product as she would if she had been permitted to take the grass in its juicy form. What has passed from the grass in its curing process and what changes have taken place in the elements in the grass, of course we cannot say, but we know that the dried grass will not give as good results as when it is green and in the succulent stage. Moreover, we feel certain from our own experience that hay cured in the shade is far more palatable and more nourishing than when it is exposed to the beating sun's rays; for this reason it is to the advantage of all concerned to cure hay in the shade. In other words, the action of the sun's rays does not improve the quality of the hay.

And all this is but an amplification of the principal followed by our mothers and grandmothers in curing the herbs gathered for domestic use whether for medical or other purposes.—Hoard's.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time which your subscription is paid.

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Notice to Advertisers—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

The Circulation of this issue is 9,000 Copies. Every one going to a bona fide subscriber.

AUGUST 9, 1910.

Dates of Issue.

August ..... —23
September..... .....6—20

PUTTING THE CONSUMERS' COIN IN THE PRODUCERS' POCKET.

The amount of money spent for milk, butter, cheese and the lesser dairy products is unquestionably stupendous. In every, city, village and hamlet of the land there is always a good market for these. Unfortunately the profits between the producer and the consumer often make the amount that the farmer receives disproportionate with what the latter pays ; that is, the producer does not receive a proportionally high price and the middleman gets more than his share of the profit. Nevertheless the road which all this money travels leads through the dairy barn. The dairy barns of the land are the vital factories in the diversion of the consumer's coin to the producer's pocket.

SOME IMPORTANT HOLSTEIN FRIESIAN RULES.

The following important rules that have for their object the maintaining of stamina in the herds were passed by the Holstein Friesian Association at their last annual meeting :

A rule was adopted in regard to the breeding age of heifers which will have an important bearing upon the future of the breed and directs the secretary to reject applications for the registration of calves born from immature heifers ; the age at which a heifer may be bred being limited to nine months.

Another important rule was laid down by the board of officers for the guidance of the secretary's office. This rule relates to the time elapsed after calving at which a cow may be put to bull. It having appeared that applications for registry were being filed upon which date of service was alleged to have been at periods varying from the very date of calving to less than three weeks thereafter, it was ordered that applications for registry be rejected which showed that service had taken place within 21 days of last calving.

LEARN MORE ABOUT POULTRY.

There is always something to learn in the poultry businass. No one can know it all, and what may be the truth to-day may be an error tomorrow. Those who endeavor to learn from others who have succeeded will make fewer mistakes and in the end be more successful than those who depend upon themselves entirely. Some things, of course, must be worked out by each individual. Each fowl differs from other flocks. Individuality and the influence of enviroment have to be considered. There is room for great improvement among the fowls of each breed, and the breeder cannot afford to neglect the study of his fowls and of the conditions which relate to their practical management. The intelligent poultryman who is in the business either for pleasure or for profit, keeps himself well informed on all the matters that relate to poultry, and if at first success does not reward his efforts he will soon learn wherein he has failed.

MARITIME FARMER AND CO-OPERATIVE DAIRYMAN, Sussex, N. B.

GENTLEMEN :

We beg to advise you that we have recently received some substantial orders for "Cow Ease" from Bermuda.

These orders are directly traceable to an advertisement which we carried for some time in your publication and you may rest assured that we will make arrangements to do further advertising in the same medium.

Yours truly,
MARITIME PAINT & VARNISH CO., LTD.,
Guy E. Martin, Mgr.

A QUITTER NEVER GETS ANYWHERE.

Every man who ever did anything really great did it by himself. Success can't be gained without confidence. Half the fibre of achievement is egotism. It is the force that carries the struggler to goal. He must believe in his ability—he must possess so much tendency and courage that others become infected with his assurance. When he meets with disbelief and discouragement, his own faith has to support and sustain him. And such faith is only to be arrived at by training, just as the athlete's stride is the result of months of effort and the hammer-thrower's form is the outcome of untiring practice.

Self condfience is a moral muscle which requires development. It is not different from any other thew and sinew—it can only grow strong through use. If you never try, no one will ever try for you. If you don't make a start no one will give you the impetus. The world is selfish—every individual is endeavoring to the best of his might to utilize his knowledge and experience and advantake to his own profit.

Only the ambitious achieve, and ambition, without initiative, is a useless possession. It has as much value as a gun without amunition.

Big things are hard to get, otherwise they would have no value. Ground fruit is easier to pick than that on the tree, but if it were sound it wouldn't lie so low. What is not difficult to secure can be just as readily gotten by every one else. The little posts are always hardest to hold because they require so little ability to maintain the competition among men who can fill them is many times more intense than the striving higher up.

Contentment is rust—men who are satisfied with what they have done soon cease to be of value to themselves and others. Every twenty-four hours produces a change in the ways of doing things, and the self-complacent man, content with his knowledge and his opportunity, soon becomes a back ledge and his opportunity, soon becomes a back number—he stands still while things are moving forward.

Don't be afraid of risking your present position—if you possess enough ability to hold it, you can hold another. On the other hand, if you are not that capable, sooner or later some one better qualified to do what you are doing will get your place.

"He who is afraid to venture his bait will never fish"—if you believe that you possess the power to do better things than you are doing—if you think that you are gifted with capacity to fulfil greater responsibilities, you will stay where you are until the end, if you don't make the effort to climb to where you rightly belong.

Suppose you do undergo a setback or two on the way to greater prosperity, if you're not willing to stand and stumble, you haven't grit and courage enough to hold on to things after you get them.

Every man who ever shinned up a tree had to slip down the trunk time and time again until he caught on to the branches and pulled himself up. Every new swimmer keeps sinking until he finds how to use his arms and legs in water. A quitter never gets anything.

CO-OPERATION BY BRITISH FARMERS.

The benefit reported to be derived by farmers from their co-operative societies in continental countries, especially Denmark, has stimulated the formation of like societies in the United Kingdom.

The Midland Farmers' Co-operative Association was formed in 1906 It now has 401 members, covers the counties of Nottingham, Derby and Leicester, and is extending its operations into Lincolnshire. There are larger farmers' societies in the country, one in Wales having 900 and one in Suffolk and vicinity 1,000 members. All are growing in membership and seem to be of substantial advantage to the farmers concerned.

The Midland association, through its general office in Nottingham, disposes of the product of its members' farms, excepting the live stock. For instance, a member sends samples of his gain to the office. Officials keep themselves informed as to the best markets and sell to the highest offer, by means of the samples. Similar methods are used with other products. A small commission is charged by the general officer for its service, which charge is believed to be less than the grain to the farmer by dealing through the well-informed intermediary. The manager of the association personally attends to the grain and cattle markets held on stated days in the district, and thus is always fully acquainted with prices and conditions.

Through the general office the member buys supplies for his farm—machinery, fertilizers, seeds, cakes for stock food, oil, coal, etc.; not, however, groceries or other family commodities. The office issues a monthly price list, for members only, giving the cost of the various articles delivered or at seaports. In the latter case the freight charges from the seaports to the principal towns in the district are stated. All the prices are said to be less than the member would be charged if he individually bought the supplies. In addition, the member is assured that his purchases will always be of the best quality and character. Articles bought or sent by the seller directly to the farmer. Any complaint or dissatisfaction is dealt with and the cause removed, if possible, by the committee of the association.

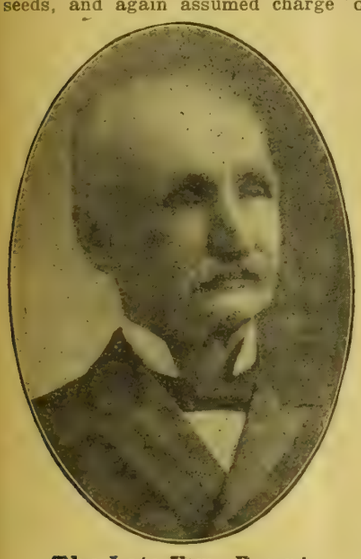
The monthly price list contains, besides the cost of supplies, suggestions and information regarding the best farming devices and methods and probable changes in prices and trade conditions. The annual cash business of the association is now about $125,000, and has steadily increased each year. The expenses are about 3 per cent. of that amount. The income from commissions and other sources paid 5 per cent. divided to the shareholders in 1909, a fair interest for each member's investment, leaving as clear profit all that he gains by dealing through the association.

The present paid-up capital of the association is $2,500. Each share costs five shillings, paid by instalments, as required. Every member must hold one share, and no more, for each ten acres which he occupies, subject to the proviso that he must hold not less than four shares.

A Great Man has Passed Away.

Our readers will be sorry to hear that Mr. Wm. Rennie, the well known seedsman and agrirulturist, who has been in poor health for some time past, died at his residence, Swansea, Ont., Sunday morning, July 24th. Ontario farmers and many other agriculturists throughout the Dominion are well acquainted with the work that Mr. Rennie did for the advancement of Canadian agriculture.

Mr. Wm. Rennie was born in 1835 in a humble log cabin in Scarboro. His father and mother having emigrated from Scotland a few years previous were in very poor circumstances. His early days were spent on the farm. Many farmers of the present day are familiar with the Rennie homestead in Scarboro, which has long since been known as the "Gold Medal Farm," of Ontario. In 1860 Mr. Rennie left the homestead and started farming for himself on the second concession of Markham, near Richmond Hill. In 1870 he rented his farm and moved to Toronto, where he established a seed business, which is to-day one of the largest concerns in Canada. Shortly after establishing his seed business. Mr. Rennie found it necessary to grow a large portion of his seeds, and again assumed charge of



The Late Wm. Rennie.

his farm. With more improved methods and a better knowledge of agriculture, he developed his farm so that in 1884, in competition for the best managed farm, Mr. Rennie was awarded the first silver medal, while his brother, Simpson Rennie, won the gold medal. Mr. Rennie's farm was the centre of some very interesting gatherings in connection with what is known as the "Markham Farmers' Club." These annual reunions used to bring together upwards of a thousand people.

Mr. Rennie retired from business in 1889, leaving the now well-known Rennie seed establishment to his three sons—Robert, John and Thomas. In 1893 he was asked by the late Hon. John Dryden, then Minister of Agriculture, to take the position of Farm Superintendent at the Ontario Agricultural College at Guelph, to demonstrate his new ideas regarding agriculture. This he did, and remained with the College for six years, bringing the farm to a high state of cultivation and thoroughly demonstrating his methods. Upon his return to Toronto he put into book form all his valuable information and experience in a volume known as "Successful Farming," a book which has been read with profit and interest by many of the farmers of Canada.

Through his skill and enterprise in agriculture and related pursuits, Mr. Rennie was brought a good deal into public view and although he has been for some years living a very private life, he is still well remembered by an unusually wide circle of intimate friends.

Mr. Rennie is gone. A great man has fallen, but the good work he has been able to accomplish, by leading the way in stimulating an active interest in better agricultural methods, will not be buried with him but will remain a lasting monument to his memory.

The College Holsteins on Farmers' Day.

Potato Blight.

THE KINDS OF BLIGHT.

There are in this country two diseases of potatoes which commonly go under the name of "potato blight". One is known as "early blight" (Alternaria solani), and the other as "late blight" (phytophthora infestans.)

The late blight seldom makes its appearance in the Maritime Provinces before the first of August, and may appear at any time from then on to the end of the season. When the weather conditions are favorable, it is very rapid in development and very destructive.

A healthy looking potato field may be destroyed under its attack in the course of only a few days. It begins near the ground and rapidly works upward on the plant. Fields affected emit a peculiar, characteristic color.

EARLY BLIGHT.

Early blight does not require as favorable conditions for its development as are necessary for late blight It is a disease which may begin to affect the plants early in June or any time thereafter. It is usually most destructive in July and August. The disease appears as brownish spots on the leaves. It usually attacks the ends of the leaves, where the moisture evaporates last, more than it does the other parts of the leaf surface. It is much slower in action than late blight. Weak plants suffer more from its attacks than vigorous ones. The injury it does is undoubtedly greater on late plantings of the early varieties and on late plantings of early varieties than it is on early plantings of late varieties. The latter are often nearly mature by the time this disease becomes serious.

SPRAYING FOR EARLY BLIGHT ON EARLY PLANTINGS OF EARLY VARIETIES.

The indications are that it will not pay to spray with Bordeaux mixture on early plantings of early varieties, but this has not yet been definitely proven. Wherever it is to be done, it must begin when the plants are small—about eight inches high, and continue about every ten days, until about ten per cent. of the leaf surface well covered with a ease, after which it is not likely to be any longer sufficiently effective to be worth while. In very rainy weather, the applications should be sufficiently more frequent to keep the leaf surface Rell covered with a coating of Bordeaux mixture. When the spraying is begun while the plants are small, an application of twenty-five to thirty-five gallons of Bordeaux mixture per acre will usually be sufficient the first time. The second application should be increased to about fifty gallons per acre, and the third and subsequent applications should be at the rate of sixty to seventy-five gallons per acre. Thorough spraying, under a pressure of about seventy-five pounds from a nozzle of the Vermoral type, is essential to success. One nozzle per row is sufficient for the first application, after which two nozzles per row will be needed.

SPRAYING FOR EARLY BLIGHT ON LATE VARIETIES OF POTATOES.

Spraying for early blight on late varieties has proved profitable at the Experiment Stations. For late varieties, the first application may be delayed until the earliest varieties in the neighborhood show signs of the presence of this disease, when the spraying should be no longer delayed. Since the plants are usually of fair size by this time, the first application should be made with two nozzles per row, using from sixty to seventy-five gallons per acre, and the same for all subsequent applications. The frequency of spraying should be about every ten days except in rainy weather, when it should be made more freuhently, as was above recommended for early varieties.

HOW TO MAKE BORDEAUX MIXTURE.

The strength of Bordeaux mixture to use in spraying for potato blight is: 5 pounds of bluestone (also known as copper sulphate and blue vitriol) and 5 pounds of the best grade of stone lime to 50 gallons of water. The bluestone can be dissolved most readily by hanging it near the top of the water. The lime must be fresh, and of the best grade, and should slake readily. It should be slaked several hours or more before it is wanted. When ready to apply the Bordeaux mixture, the bluestone solution, containing the five pounds of bluestone, should be podred into the sprayer barrel and diluted to about thirty-five gallons. The milk of lime, containing the original five pounds of stone lime, should then be diluted to about fifteen gallons, and poured into the diluted bluestone solution. The resulting product is the Bordeaux mixture, ready for use. Any poison needed for potato beetles may then be added, thus spraying for blight and the potato bugs at the same time.

TESTS FOR BORDEAUX MIXTURE

If the lime used is of low grade, there is danger of burning of the foliage from the Bordeaux mixture. A good test is to hold the point of a knife-blade in the mixture for a short time. If copper collects on the blade, more lime must be added to prevent injury.

A good chemical test is by means of potassium ferrocyanide. Dissolve an ounce in a small quantity of water. To test the Bordeaux mixture, take out a dipper-full after stirring well, and let settle for a few minutes. Then pour into it a few drops of the potassium ferrocyanide solution. If a rust like sediment forms, more lime must be added. If no sediment forms, and there is only a slight yellowish discoloration, sufficient lime is present. Potassium ferrocyanide is a very deadly poison.

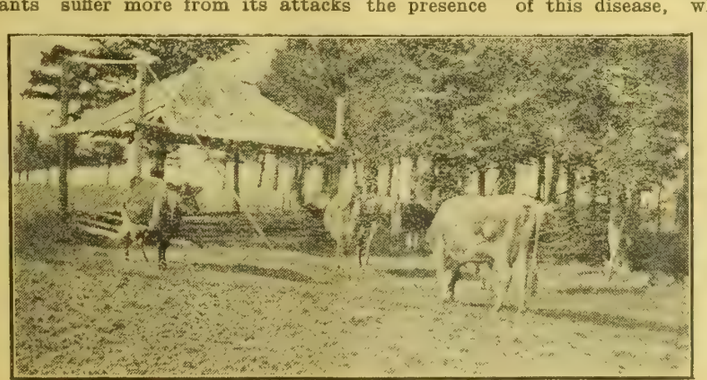
STOCK SOLUTIONS FOR BORDEAUX MIXTURE.

Stock solutions of bluestone and lime save much trouble when Bordeaux mixture is being used on a large scale. A stock solution of bluestone may be prepared by dissolving in a keg or earthen jar all of the bluestone that the water will hold. A supply must be left hanging in the top of the water at all times in this method. A gallon of such solution will contain three pounds of bluestone, and the amount taken out can be adjusted to the number of pounds of bluestone desired.

A stock solution of lime may be prepared by slaking a certain number of pounds of lime and adding enough water so that each gallon will contain two pounds of lime. The milk of lime mixture must be well stirred before taking any out, or there will be danger of not getting enough lime into the Bordeaux mixture to keep it from burning the foliage.

CLOSING CHARGE.

Throughout all this work, it must be remembered that high pressure, thorough application, constant agitation, and careful straining are essential to success.



A Rural Scene in Prince Edward Island.

Telegraphy

with a thorough knowledge of Station Agent's work, as taught in the Central Telegraph School, Toronto, and with the influence of a well established reputation, like ours, is the surest passport into a good salaried situation, leading to a successful future. Free catalogue explains. Write for it. Address :

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Monday, AUGUST 29th, 1910,
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Fredericton Business College

opens its splendid new rooms for the
FALL TERM.
We are making preparations for a great big attendance this year.
If you have not already received a catalogue, write for one. Address,
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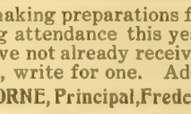

OUR 1910-11 CATALOGUE

Now in the Printers' hands, will show an increase in rates, caused by our additional equipment and the greatly increased cost of everything we have to buy.

Those entering before the Catalogue comes from the Printer can claim present rates.

S. KERR, Principal.

Your old Carpets will make you handsome Rugs. Write for booklet, mailed free.—The MARITIME RUG WORKS, St. John, N. B.

Renewing the Strawberry Patch.

Scant or improper cultivation at the right period is one of the main causes for so many failures in strawberry culture.

If the strawberry patch has been well cultivated and cared for it may be retained from three to five years. At the end of that period new plants should be secured and set out.

Renewing the strawberry bed should be done as soon as possible after the last picking of the fruit, in order that the new plants may become fully developed before severe or freezing weather sets in.

Mow the vines close to the ground allow the mulch to dry, and remove it from the bed. If the mulch is evenly distributed and not too deep it may be fired. Of course, one should do this when there is a brisk wind to carry the fire quickly over the bed so that the heat will not remain long in contact with the plants.

The object of this fire is to destroy all fungous disease and insect pests which may be present; and while the vines may appear greatly damaged at the time of the fire, they will spring up with renewed vigor in a very short time. Also, if the vines are thus treated nothing is left to hinder proper cultivation. Where immediate removal of the mulch is desired it may be raked up and hauled to other portions of the farm for fertilizing purposes, but if it is not too deep we would advise turning it under as a fertilizer for the strawberry plants.

After the above treatment plow the soil away from the side of the row, being sure to leave a few inches of the new vines on each side of the row, as the young vines are more prolific than the older ones in sending forth runners. When the middles are plowed harrow the rows lengthwise; then crosswise not less than twice—more if desired, as the harrowing pulverizes the soil and puts it in fine condition for the plants to grow, and for one to give them ideal cultivation.

Use the cultivator from this time on, always plowing the rows the same way each time and keeping it well away from the vines as far as you wish the row to become rooted. If the rows get too wide before the second or third plowing attach rolling cutters to the cultivator and keep the vines cut off the proper length. At about the third plowing sow the patch to oats and harrow them in, taking care that the new plants are not torn from the ground. This crop will form a luxuriant growth before severe weather comes on and, falling over, furnishes fine protection from the severity of wintry weather. Then, the following spring, the rank, dead growth will form one of the finest, if not the greatest, mulch for the vines, which are then ready to put forth for the coming crop.

This article is intended for the more extensive grower of strawberries. The farmer with a moderate sized bed for home consumption only, or a bed handled in connection with intensive agriculture, should have rows only eighteen inches or two feet apart, and would of necessity have to be spaded up, being treated on other points the same as the more extensive beds.

M. COVERDELL.

The Hazards of the Apple Deal.

At no time in the history of the apple business of this country has the fact that an unusual hazard exists for the buyer, small and large, in connection with the purchase of the fruit been so prominent as now. It is appreciated by a few. Experience has taught some the evils of hasty purchase, but in a good many instances the lesson learned in the process of forced liquidation of assets in the shape of fruit on which costs have accumulated at the end of one season, have been forgotten before the advent of another. The few wise ones have stayed out until the high pressure has been expended, and there are a few operators in this market who are prosperous examples of prudence. The great error made by a speculator is in his undervaluation of the business acumen of the grower, and in the fact that in a good many cases too little knowledge has been gained concerning the production (volume) of the total crop. Speculators have lost their "shirts" on the underestimating of the crop. It has been years since this country produced a really short crop of apples, and well posted authorities in the apple game have come to admit that there is now no such thing as a short apple crop.

If the game to be played were left in the hands of the men who know, the distribution of any one season's crop of apples would be a thing easy to compass and at some profit to both grower and operator. But such a thing is not possible. Along with each crop of apples is grown the reckless, ill-informed buyer who, fearful of being left, rushes to the grower with propositions. The grower plays the hungry buyer to the gaudy fly and the inevitable result is the high prices. This method of procedure injures grower, operator, speculator, jobber, retailer and consumer. It has the effect of causing a high opening market, further excites the cupidity of the grower, and not infrequently causes him to lose a chance to sell the balance of his crop. This failure to sell is the boomerang that hits back at the reckless operator and the interests behind the sale of the apple crop. The balance—no matter who holds it—is the thing that comes in just before the first snow flies and forces down the market on high-priced apples. It is always a big factor when the market opens high and the influence of it is seen in the apple situation for months when the trade should be the heaviest. The injury done to the trade is told in market reports of nearly every year in the last ten. The heavier the unsold balance the longer the period of depression. In one or two seasons in years the effect of common stored goods on market values has been pronounced all through the selling period.

Of late the trade has shown a great deal more interest in this big question of apple buying. Some skilled operators have gone into the matter thoroughly, and this examination of the situation has developed the fact that the only safe thing to do is to go slowly. The safe course for the buyer is the pursuit of a waiting policy. This means that instead of the buyer seeking the seller, the latter should seek the buyer. If the experience of last season has taught anything, it has set the seal of approval on the waiting policy. The buyer has all to gain and nothing to lose in the apple campaign, since sooner or later in the season he is sure to get his chance to buy on terms that will leave a margin of profit, always, of course, provided he is not one of these who rush on to boost the price to the grower.

Now that there is little prospect of a short apple crop in any year, the road of the apple operator is a different as well as a more difficult proposition. Knowing as he does the extra hazard that exists in the game to the early buyer, there seems to be warrant for the belief that every section of the country will be carefully scanned before any deals of consequence are made by the heavyweights in the buying movement.—Fruitman's Guide.

Troubled with Heart

NERVES WERE ALL UNSTRUNG

Mrs. Oscar Hamilton, Forest Glen, N.S., writes:—"I can truthfully say that Milburn's Heart and Nerve Pills have been a great friend to me. A few years ago I was very much troubled with my heart and my nerves were all unstrung, I had terrible pains all through my body. I was weak and had frequent and severe dizzy spells, and was continuously having to consult doctors. I had Milburn's Heart and Nerve Pills recommended to me and after having taken a box they appeared to help me so much I continued to take them, and was soon able to do my work again. For this I am very grateful and would advise all people with weak heart or unstrung nerves to give them a thorough trial."

Milburn's Heart and Nerve Pills are the original heart and nerve cure and are sold at all dealers for 50c per box, or 3 boxes for $1.25, or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Extension to breakwater, Richibucto Cape, N. B.," will be received at this office until 4.00 P. M., Wednesday, August 17, for the construction of an extension to the breakwater at Richibucto Cape, Kent County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department, at the offices of E. T. P. Shewen, Esq., District Engineer, St. John, N. B.; Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on application to the Postmaster, Richibucto, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures, stating their occupation and places of residence. In the case of firms, the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, for the sum of two thousand three hundred ($2,300.00) dollars, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By Order,
R. C. DESROCHERS,
Asst. Secretary.

Department of Public Work,
Ottawa, July 16, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

F. C. WESLEY CO.

ARTISTS, ENGRAVERS, and ELECTROTYPERS.

59 Water Street,
St. John, N. B.

FOR SALE.

100,000 Apple trees, 75,000 Pears, Plum, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agente wanted on vacant territory, selling for fall and spring 1911 delivery.

THOS. W. BOWMAN & SON CO., LTD.
Ridgeville, Ont.

INSIST ON HAVING
"SOVEREIGN"
SHEATHING FELT

Don't be satisfied with inferior, inflammable, unsanitary, malodorous tar paper, which affords a breeding place for germs and vermin. For very little more you can get.

"Sovereign" Sheathing Felt

That will last the life of the building. It is odorless, fire-resisting. Wind and damp-proof. Germ and vermin proof. Send for our booklet "Home Comforts" mailed free on request.

THE STANDARD PAINT COMPANY
OF CANADA, LIMITED.
Sole Manufacturers of Rubercid Roofing.
286.St. James Street, - - Montreal
Stocks carried at Winnipeg, Man., and Vancouver, B. C.
Dealers Everywhere.

Report of Inepector W. McIntosh for Spring of 1910.

Hon. D. V. Landry, Commissioner for Agriculture, Fredericton.

Sir: Acting upon instructions received from your department that a reasonably careful search be made for the brown tail moth in this province early in April I began the search. It was thought best to examine those sections where the moth may be expected to appear, namely the City of St. John and vicinity and the parts of Charlotte county bordering on the infected area in the State of Maine and the railway and highway roads leading from Maine. All fruit trees within one hundred yards of the road or railroad were searched and a sharp lookout kept for nests on the forest trees. All schools passed en route were visited and a short talk given on the brown tail moth, actual specimens being shown and a colored plate illustrating the life history of the moth left in each school. Your inspector found it necessary to return to St. George and found the school children had thoroughly searched the trees in the vicinity and a number of summer nests of the cherry tortrix, which are very much live the brown tail nests, were removed and examined and one sent to St. John for identification. Since the inspection was made the teachers and school children of a number of the schools visited have been sending insects for examination showing that a watch is being kept for dangerous insects.

The search was commenced in St. John city and suburbs, the area was most carefully gone over. Nearly every year male brown tail moths are taken in the city of St. John; this is not surprising for each summer large numbers of persons come from the infected districts in Massachusetts and moths are probably brougnt on clothing and baggage.

The search in Charlotte county was commenced at St. George and continued along the main road to St. Andrews, the section bordering the St. Croix was inspected, St. Stephen and Milltown were visited and the highway road and railroad from Welsford to St. John.

Sixteen days were devoted to the search and we are pleased to say no traces of the brown tail moth were found in the districts visited.

Though the brown tail moth has not yet become established within the province, a number of adult male moths have been taken as previously stated, and we may reasonably expect it to appear, as it is found in large numbers in the State of Maine and also occurs in Nova Scotia. The moth was first noticed in Summerville, Mass., about sixteen years ago. It is an European insect which doubtless had been introduced into this country by accident.

Since its introduction it has spread rapidly and has proved one of the most dangerous insect pests known. Last year a half million dollars was spent in the State of Massachusetts for the suppression of brown tail and gypsy moths. This included the state's annual appropriation of $265,000. The State of Maine makes an annual grant of $17,000 for the suppression of these pests. Wherever these insects have obtained a footgold and have been allowed to increase without being recognized, they have occasioned great loss and the expenditure of large sums for their suppression. Therefore, it is desirable that we should take measures to recognize and deal with them before they become established in any section of the province.

Respectfully submitted,
(Signed) WM. McINTOSH.

Spraying Increases Profits.

"If you neglect to spray your fruit you will not have success; spraying is the link between success and failure in fruit growing," were Mr. Farrand's initial words in the address he gave on "Spraying for Insects and Diseases" at the meetings of the Niagara Peninsula Fruit Growers' Association in March.

Different formulae had to be used in different emergencies. A mixture of four pounds of lime to six pounds of blue vitrol to 40 gallons of water, had proven a general remedy, for many diseases. Black rot in grapes was prevented by Bordeaux. The lime and sulphur mixture was efficient for San Jose scale and other fungous diseases. The peach has a tender foliage and the strong mixtures that plum and apple foliage withstand, should be used with great care if put over the former trees.

Proper spraying is one of the preventives of fungous and insect pests if done at the proper time. A delay of a day or two may cause a loss of money. Results were obtained in proportion to the spraying done. "Put your mixtures on liberally," was the speaker's advise.

Different processes and utensils for the work were touched on. "There were men," said Mr. Farrand, "who believed that good results could ne obtained by hand spraying, but this was not successful as tests had proven," The method took up an enormous amount of time; in fact, a power outfit would do the work three times over in the time it took a hand pump. The gasoline engine was, in his opinion a satisfactory solution to the labor saving problem.—C. A. S.

lb

L. H. Newman, secretary of the Canadian Seed Growers' Association, and known to a good many of our readers thougn his visits to the Maritime Provinces, recently left for Svalof, Sweden, where he will spend some months in studying plant improvement and commercial seed growing under Dr. Nilsson. It may be remarked that Seed Commissioner Clark recently investigated the work being done by Dr. Nilsson and was very strongly impressed with the benefits to be derived by Canada by a more careful study of the work of this and other European scientific plant improvers. Mr. Newman is a young man who is very enthusiastic in his work, and we shall expect to find him bring back to Canada information and inspiration that will help him greatly in his present capacity.

Every statement concerning Red Rose Tea is made most carefully. Every claim that has ever been advanced has been fully borne out by the tea itself. You, if you use it, have always found it good tea. So good that no other tea pleases you as well. You may try substitutes but you always return to Red Rose simply because it has the fine quality and full value that pleases and satisfies. 63

Prices: 30c., 35c., 40c., 50c. and 60c.

MOLASSINE MEAL
The Unique Food for All Stock.
Have you tried the
MOLASSINE DOG CAKES ?
Marvellous effects on Dogs. Keeps them healthy, free from worms, and their skins in fine condition.
—SOLE IMPORTER—
Andrew Watson.
91 Youville Square, - MONTREAL.

NOTHING BETTER ON THE MARKET.

Will green two rows of Potatoes at once, as fast as a man walks.

Adjustable to any width of row.

Wide or narrow planting.

In general use many years.

Thousands sold annually.

The length of the Champion is such that the poison is kept a safe distance from the operator.

ILLSLEY & HARVEY CO., LTD.,
Port Williams, - Nova Scotia.
General Agents.

If your liver is sluggish and out of tone, and you feel dull, bilious, constipated, take a dose of Chamberlain's Stomach and Liver Tablets tonight befofe retiring and you will feel all right in the morning. Sold by all dealers.

Farmers Do Exceptionally Well

——As Agents for the——

Empire Cream Separators

1st.—Because no selling experience is necessary.

2nd.—Because one farmer understands the other.

3rd.—Because the Empire Cream Separator is the easiest to clean, easiest to turn and easiest to sell.

4th.—Because selling separators can be done at odd times without neglecting farm work.

5th.—Because the makers of Empire Cream Separators stand behind every machine.

6th.—Because there is no fault-finding after machine has been placed.

Write us to-day for further particulars.

The Empire Cream Separator Company of Canada,

Sussex, - - N. B.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Preserving Butter in Summer.

William H. Underwood in Country Gentleman discusses this important subject:

Butter cannot be preserved by any covering. Its inherent quality alone can do this. Butter is not permeable by the air. If it is solidly packed in an air-proof receptacle, necessarily only the top of it can be affected by contact with the air. But there is always some impurity retained in butter after it is made, in spite of the most skillful treatment. By skilful management, this may be reduced to a minimum, but there will still be some of the buttermilk left in it. The best made butter exists in the form of small globules after churning, and it is possible to wash these in pure cold water so thoroughly that all traces of buttermilk may be got rid of completely; yet each of these globules is made up of smaller globules; so there are yet some minute particles of buttermilk unavoidably left in the butter which cannot be removed unless it is actually melted into oil, and then solidified again. This process is not admissible. Under the best conditions, the best-made butter may be kept six months in a dry, cool cellar, well ventilated, when it is packed in a perfectly pure, air-tight jar or tub, and this without addition to it of more than the due proportion of pure salt. Butter may improve in flavor—to some tasts—during this time of storage.

Some antiseptic entirely devoid of flavor, as saltpeter, may assist in keeping butter, but there is no necessity for its use. If, however, the maker has not the experience which gives confidence, the use of one-quarter ounce of it to the pound of butter will be a help in keeping it. This, and the salt, one ounce to the pound, together should be reduced to a fine powder and intimately mixed with the butter.

Of course the receptacle in which the butter is packed must be perfectly free from taint. It is the common practice in fine dairies where the surplus is packed in this way, to use white-oak pails of 50 pounds' capacity, made in the best manner, and varnished with copal, dissolved in alcohol, inside and out. The butter is packed solidly; and if not all at once, what is packed is covered with brine made with boiling water and strained, then cooled, and as each layer is packed it is sprinkled with salt or this mixture. When the pail is filled to within a quarter of an inch of the edge, this space is covered with a piece of muslin well washed in boiling water, and then dipped in cold brine, and spread over the butter, which has been lightly sprinkled with salt or the saltpeter mixture made very fine. The cloth should extend a full inch over the edge of the pail, which is then filled up with the finest dairy salt, this of course is used all through the work, and the edges of the cloth are turned down over this salt.

The salt is pressed firmly down into the edge of the pail, the cover is put on, and this is pressed down as tightly as possible by a lever, until it meets the edge of the pail. Then the clips by which it is held down are fastened. Some buttermakers are so particular as to use a gasket of thin cork, or canton-flannel doubled, and soaked in brine, around the edge of the pail, to secure the butter still further from contact with air. The pail so packed is kept in a cool, well-aired place, free from odors: a place especially provided for it is best, and a label should be attached, with the number the date of the package. One may then guarantee the condition of the butter to be equal to fresh-made at the end of six months, and to all but those consumers who prefer flavorless and odorless butter, the well-ripened, aromatic article will be perfectly satisfactory.

Grade up the Herd.

The common cow is not good enough, but she furnishes the best obtainable foundation upon which to bdild a herd of greater efficiency. The farmer who is really interested in increasing his profit must undertake a process of selection. There is a wide difference in value between the best and the poorest cow in his herd. He must learn to know the good cows and retain for future usefulness the heifer calves from these cows. The poorest cows should be sold and in many instances the money derived from such sale could to most excellent advantage be used in building a stable for the remaining cows. The best of the common cows should be bred to a good Holstein bull, according to my idea. I think the grade Holstein is the best farmers' cow in this country. There are farmers, however, who are so prejudiced against the Holstein that they would quit the dairy business or refuse to enter it, if they thought it necessary to introduce Holstein or other dairy blood into their herds. Dairy blood is the best but not absolutely necessary to obtain a reasonable degree of profit from the dairy. I certainly would not use a bull whose ancestors have been bred for beef or a bull which may himself have been reared by a nurse cow. It is impossible to get milk by such breeding. I would use in preference a bull calf from my heaviest milk-producing cow. I would then know at least that his mother was a milk producer. Life is too short for a farmer to undertake to flesh out and milk out the beef quality which breeders have bred into their stock and which is as firmly rooted as the Rock of Ages. The quickest and most effective plan of grading up for the dairy is with dairy blood. The sacrifice from a beef standpoint will not be so great as at first it may appear. The more butterfat a man gets the less value beef is to him.—T. A. Borman, in Kimball's Dairy Farmer.

To Farmers' Wives!

Have you illness in your home, either yourself or loved ones? If so, you cannot fail to be interested in this announcement. Magnificent Oxygen Parlors have been opened up by

The Maritime Oxygenator Co.,

Located at Suite 20, in the J. M. Robinson & Son's Building, opposite Market Square,

ST. JOHN, - - New Brunswick

Electric elevator—lady attendant—Telephone Main 2367.

Our wonderful machines (which sell for $25 and $35) cure all curable diseases. They last for life. May be used by men, women and children. They are not an experiment. Have had 14 years of successful record. Our 72 page book, "Oxypathy," for the asking. No drugs, massage or electricity used. Just Oxygen and nothing but Oxygen. Scores of reputable citizens throughout the Maritime Provinces attest the splendid curative power of these marvelous machines.

Address all communications to

C. Fraser McTavis, General Manager

P. S.—Machines rented by the month if desired.

P. S. S.—No. 1 positions open (to representatives) in unoccupied territory to high-grade men and women.

Intending Exhibitors Should Send in Their Names at Once!

To the Secretary of the

DOMINION EXHIBITION

For the First Issue of

The Complete Prize List

Containing all desired information regarding Cattle, Horses, Poultry, Agricultural, Horticultural, Educational and Woman's Work Competitions.

H. J. P. GOOD, Mgr. H. A. PORTER, Sec't'y.

Poor Milk.

There is no article of food so generally used from the cradle to the grave as milk. In this we are all agreed that it may be good, bad or indifferent, and the neagre intelligence, or shall we say instinct, of the infant is equal to the task of differentiating one quality of milk from another. But the children of a larger growth are generally ignorant of the conditions which enter into one phase of the production of inferior milk.

What I refer to is the common mistake in believing that the quality of milk is determined largely by the nature of the food that the cow eats.

Look Him Right In The Eye

Two sorts of agents claim that disk filled or other complicated, hard to wash, out-of-date cream separators are modern and easy to clean.

One sort knows better but hopes you don't, because he wants to sell you that kind of machine. Look that fellow right in the eye—tell him you do know better, and that he can't fool you. The other sort of agent is simply mistaken—he does not know the facts. Tell him to look at a

Sharples Dairy Tubular Cream Separator

Tell him it has neither disks nor other contraptions, yet produces twice the skimming force, skims faster, skims twice as clean and washes several times easier than common separators. Wears a lifetime.

The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.

Write for Catalogue No 194

THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

Every Woman Who Does Her Own Washing

will want a "Puritan" Washing Machine

Ball bearings and roller gear mean easy washing. All cogs and machinery covered. Strong, substantial. A child can wash a tubful of clothes in 5 minutes with the "Puritan".

Yes Ma'am—The Best

"Favorite" Churn has proven itself the best churn in Canada. 8 sizes.

Write us if your dealer does not have them. 72

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FOR FARM, FACTORY AND BOAT
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Largest Manufacturers of Concrete Machinery in Canada.

Calves Raise Them Without Milk
Booklet Free
A. A Archibald & Co, Truro, N. S.

One of the stock arguments used against the feeding of brewers' malt to dairy cows was that it produces a poor quality of milk. The same argument has been used in the case of beef pulp, this is a mistake. Each cow is a physiological unit in the production of milk constituents, when in a healthy condition. The quantity of milk varies greatly according to the kind and amount of feed consumed, but the quality remains uniform with remarkable persistency. W

If the cow is sick or starved and the body functions abnormal, then it may be different. It is a fact of much interest, as well as of economic importance, that the cow under all sorts of adverse conditions will persistently adhere to her standard in the relative proportion of milk constituents.

The flavor of milk will vary according to the feed and other things. The milk may be read or blue in color, and the cream may be ropy; it may sour quickly and many things may happen to it because of the presence of bacteria—when cans and bottles are not sterlized, and the milker is careless; but the same amount of cream, casein, milk sugar and other constituents are there, quart for quart, providing the cow is healthy and the milkman has not skimmed it down to three per cent—or more.

There is a great difference in the quality of milk in individual cows, as well as in breeds. Samples of milk from a certain cow were brought to the veterinary department of the Colorado Agricultural College for analysis. The complaint was that there was no cream on the milk. Analysis of each sample revealed about two per cent butter-fat. The cow has been examined and found healthy. The feed has been changed, but the milk remains poor. She is that kind of a cow.—Geo. H. Glover, Colorado Agricultural College, Fort Collins.

Difference Between Buttermilk and Whey.

The solid matter in whey usually amounts to between six and seven per cent. This solid matter consists of about 5 p. c. milk sugar, .3 p. c. fat, 5 p. c. ash and .8 p. c. albumen. This is "what will be left when the water is all boiled out of the whey."

The difference between whey and buttermilk is principally in the proportion of casein in the two products Buttermilk contains about 4 p.c. casein while in whey there is a little less than 1 p.c., albumen which is the same kind of a product as casein. There is also about 1 p.c., less milk sugar in buttermilk than in whey. The two products contain about the same kind of constituents but they differ in the proportion of these constituents.

Buttermilk is worth at the present time at least thirty cents per hundred for feeding pigs and if tons of it are being wasted at the factory you patronize, an effort should be made at once to save this enormous waste. Buttermilk has the same stock feeding value as skimmilk but it may be converted into a human food product by making buttermilk cheese which is described in a bulletin of the Wisconsin Experiment Station. If a market can be found for this product the buttermilk can be sold for approximately $1.00 per hundred pounds.

Variation of Casein in Milk.

As a rule the per cent of casein in milk is more uniform than is the per cent of fat. But tests made during the past few years have shown that there is a considerable variation in the casein content of the milk of some cows. It varies as much as 1 per cent; that is from 2-8 p.c. to 3-8 p.c. But as a rule the variation in casein contents is considerably less than this. I do not know that this variation is a characteristic of any particular breed of dairy cattle. It is more a peculiarity of a single cow than a breed characteristic. Ib

The average amount of cheese that is made under satisfactoty conditions from 100 pounds of milk testing 3½ p.c., fat is about 9.1 pounds and from milk testing 4½ p.c. fat about 11.7 pounds.

E. H. FARRINGTON.
Wisconsin Dairy School.

Too Hot to Work.

Editor The Maritime Farmer :—

Some of the old members of cow testing associations appreciate the system very much, and are realizing a profit by it. In the Shearer, Ont., Association, for instance, one man stated that he has delivered to the factory almost as much milk from ten cows as he did two years ago from fourteen cows. He has sold one of the ten for $45.00 for beef. At her best she gave 31 lbs of milk per day; she is replaced by a cow costing $50.00, now giving 41 lbs. of milk per day.

This statement shows the immense saving of labour that can be effected by keeping cows selected on their records. It is too hot weather to work round and bother with four unnecessary cows if the smaller herd, as indicated above, brings as good return. If it pays to milk a cow it pays to milk a good one. The herd needs pruning of the dead, unprofitable wood. Dairy records of individual cows show conclusively which to lop off. Blank forms are supplied free of charge on application to the Dairy Commissioner, Ottawa.

The Magnet Cream Separator

is **entirely different** in its **construction** and is **better** than any other cream separator.

It is built

MECHANICALLY CORRECT.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT STEADY AS A ROCK

MECHANICALLY CORRECT means putting the power on the machine by properly **graded steps** or gears. When you see a very **large wheel** turning a **very small one,** it is a **violation** of **mechanical rules** and means wear, breakage and **trouble,** but is done to **save the cost** of the extra wheels of steps. The **Canadians** who originated the **MAGNET** were **educated mechanics** and could **not** be induced to apply the make shift, worm gear drive, adopted by makers who preferred cheapness in construction to durability. Use has shown that the worm gear drive soon wears, the bowl wobbles and then considerable butter fat goes into the skim milk at each separation. The square gear does **not wear** and the **MAGNET** skims as closely after twelve years' use as the first day it skimmed.

Do not take our say so, examine for yourself.

Take the **MAGNET** stand, it is **solid, strong** and **rigid,** constructed to **hold the gears without vibration** or **possibility of accident to anyone.**

Square gear drive is used, the only drive approved of for a **fast running** machine like a cream separator.

The shape of the **MAGNET** bowl is **different** from others, being **longer,** enabling the insertion of the famous **one piece skimmer,** so constructed as to take out all the butter fat but a trace, at the same time **draws** out all **dirt and foreign matter** and holds the same to be washed off. This skimmer delivers **pure cream.**

Bronze bearings are used on the **MAGNET,** because being harder than steel they do not wear out.

Glass hard steel balls, extra large size, are used, will not wear or break.

The brake (**MAGNET PATENT**) circles the bowl, stops the machine in eight seconds, does not injure it.

The bowl is supported at both ends and cannot wobble or get out of balance (**MAGNET PATENT.**) All other separator bowls are run on one end, the vibration of which leaves butter fat in the skim milk.

Every point in the **MAGNET** is a strong point, no weak spots.

A cent postal card will give you a full demonstration of the **MAGNET** in your own dairy. No obligation to buy.

THE PETRIE MFG. CO., LIMITED,
Vancouver, Calgary, Winnipeg, Hamilton, Montreal, St. John.

Making Cottage Cheese.

Making cottage cheese is a comparatively easy process. The skimmilk is allowed to stand in the vat until it sours, or it may be coagulated by adding a little hydrochloric acid. After curdling, the whey is drawn off and the curd collected on a cheese cloth strainer. The strainer is usually made of linen. It is slipped over a wooden frame, the ends of which are supported on wooden horses which are set over the drain. The curd is stirred in this strainer to free it from the excessive whey.

The flavor and texture of cottage cheese may be improved by adding cream or soft butter to the curd on the strainer. Sometimes dry sage or caraway seed is also stirred into it in order to give the cheese a special flavor. It is salted to suit the taste —about two pounds of salt per thousand pounds of milk.

The following process has been found to give satisfactory results: Set the skimmilk at 70 degrees F. until it coagulates; cut the curd fine with a curd knife then heat to 90 degrees for 30 minutes in the whey. At this point draw off the whey and transfer the curd to the strainer described above.

I think you will have no difficulty in making this cheese and the quality of it will depend a great deal on the length of time it is heated in the whey and whether or not you can afford to mix a certain amount of butter or cream with the cheese after it is made. You can calculate from the cost of the skimmilk and the amount of time required to make the cheese about the price at which it should be sold.—E. H. Farrington, Wisconsin Dairy School.

LIVE STOCK.

The Breeding Ewe.

The breeding ewes should not be permitted to run down in flesh during the suckling period. Where farm flocks are kept this may be remedied easily by removing all ewes from the general flock that seem to be on the decline. There is always some reason for this condition which the intelligent experienced sheepman will readily detect when investigation is made. Old ewes are always subject to decline, because their teeth, or lack of teeth, injure their chances in grazing and they are incapacitated to carry on the functions of mother in the feeding of a big, strong lamb and maintain their own vigor and strength. Such ewes need a little extra feed and care.

The ewe and lamb flock should be kept separate from the other sheep, unless the total numbers are small, in which case they may all run in the same pasture. It is always preferable that the flock has access to salt at all times. This should be kept in a box under cover in order that it be free from rain or moisture. Water is very important for both ewe and lamb and should be provided by running stream or pumped in clean tank or troughs kept free from mud or filth. Slough or surface water taken from mud holes is often the cause of disease, especially with the lambs.

The lambs should be taught to eat ground feed before weaned, and weaned when 4½ to 5 months' old. As soon as weaned the lamb flock should be put on fresh grass where there has not been sheep during the summer. The ideal place is on a meadow where the aftermath has grown up. Clover pastures are excellent for the newly weaned lambs.

The Growing Pig.

The feeder can learn much from close observation of the animals under his care, noting their likes and dislikes and the suitability of foods at different ages. In pig feeding the best opportunities are offered for studying results since they respond readily to good rations and comfortable quarters.

Prof. Dietrich, of Illinois, has pointed out the good influence of exercise in maintaining the health of the growing pig. For the most economical production of pork it is necessary to give the young pig an abundance of exercise to keep its digestive system in order.

The market benefit derived from pasturage is attributed to the fact that in grazing the pigs get the needed exercise which stimulates the functions of respiration, digestion and metabolism, thus enabling them to utilize larger quantities of feed to better advantage. That is, they will make larger and more economical gains from a given quantity of feed, grain and pasture combined when they have exercise than when they have no exercise.

In order to get best results it is undoubtedly necessary, as shown by experimental data, to feed the right quantity of water as well as the right quantity of the other nutrients and another one of the principal reasons that winter feeding of pigs has not been more successful is because an insufficient amount of water was used. During the winter season in cold climates where the pig is given dry feed and free access to water he will apparently not drink enough for maximum and most economical production.

It was determined in experiments conducted by Prof. Dietrich that the water requirements of a pig begins with twelve pounds daily per 100 pounds of live weight for hogs two months old and falls gradually to four pounds daily for pigs eight months old and in prime condition for market.

In general all the water is given with the feeds in the form of a slop, but a limited amount of recent data seem to show that, in so far as the water is concerned in itself, it makes some difference as to how it is fed, as well as the use of the right quantity. The best results have been obtained by feeding the bulk of the water after the rest of the feed has been eaten, using enough water to wet the dry feeds and enough feed in the water to mave it palatable. During the hottest weather, however, it seems to be necessary to add a little more water to the dry feed. But the manner in which the water is used in a ration may exert considerable influence in other directions, as, for instance, the distribution of the other nutrients, the amount of exercise the pigs get, etc.

By giving the pigs dry feed or a thick slop and then free access to water they did not do as well as in cases where the above specified quantity of water was mixed with all the dry feeds in the form of a slop. The former method, however, produced better results in summer than in winter, but was also comparatively ineffective during the hot weather. This indicates that in winter the pig will not drink enough and that during the hot weather of summer he will drink too much when he is given free access to water.

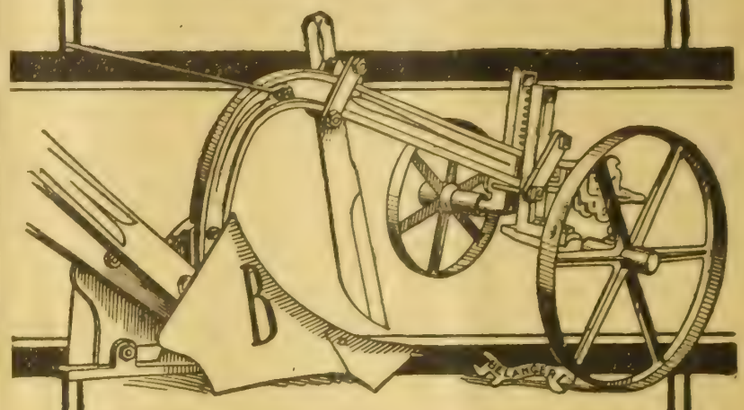
Swine for Breeding.

There are many buyers looking for show yard winners and the young breeder who is building up a herd will often be compelled to pay more money for a show winner, than an equally good animal would cost him if purchased in his normal condition. Show yard honors have value, but there are many winners that never prove valuable breeders when put to the test in a herd. It is seldom profitable to invest a large amount of money in a high priced breeding boar until there are a number of choice sows to mate with him.

The character of the herd will depend precisely upon the quality of each and every animal selected for breeding purposes. The boar should be an excellent individual ideal in form, size, color, markings and possess finish and quality. He should have a sprightly, elastic step and a graceful carriage. He should be able to look you square in the eye and have a kind and intelligent face, eye and head. A fine, silky coat, smooth sides and be free from wrinkles. He should have a strong, broad and, well arched back; shoulders wide, deep and broad on top, compact, smooth and well down on arm; loins full and smooth; chest large and roomy; rump long, broad and well rounded, and tail well set up, tapering and curled; ribs well sprung from the back, and chest roomy and large; hams long, deep and thick and well rounded from points down to the hocks, sides long, straight, deep and free from wrinkles and flanks well set down; legs short, set at each corner and standing erect, front legs should stand straight and be muscled down on arms; hind legs strong and hocks well set, and short and firm pastern; feet tough and erect toes. Added to all of these requirements he should come from a line of ancestry possessing the same qualities.

In selecting sows for the foundation herd it will be best to buy them from one herd that has been established for many years, until the animals bear a striking uniformity to each other, and the blood lines have become thoroughly established. This enables him to take up the work where the man who bred them left off and continue the work of improvement, instead of buying a miscellaneously bred bunch of sows that possess no fixed type. The sows had best be selected from some estab-

YOU DON'T NEED A SULKY PLOW—GET THIS TRUCK.



THIS truck under the beam makes an ordinary plow as solid as a sulky—takes the strain off the plowman's arms—makes it almost unnecessary to hold the handles—keeps the plow working at an even depth—makes the draught easier and more regular on the horses—makes it possible for a boy to plow as well as a man could. Anyone can put this truck on ANY plow in 5 minutes—you don't need to have one of our celebrated "B" plows to work it. The large 18-inch wheel runs in the furrow, regulating the furrow thickness and width; the small 12-inch wheel supports the plow when the plowing is too deep and the plow has a tendency to overthrow. Remember, $5.00 will put this truck on YOUR plow—isn't that cheaper than a sulky? What's more, that price includes free delivery anywhere in Ontario, Quebec or the Maritime Provinces. Write to us for Catalogue No. 100 5

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Life is too short to be without a "LONDON" gas or gasoline engine to do that heavy, tiring crank turning and handle pumping you have done all your life.

A postal brings our Catalogue 18 G.

London Gas Power Co., Limited, London, Canada
Formerly Scott Machine Co., Limited.

Lost Five Children With DIARRHOEA

Saved the Sixth One With DR. FOWLER'S Extract of Wild Strawberry.

Mrs. John Firth, Craighurst, Ont., writes:—"I have had six children and lost them all but one. When young they would get Diarrhœa and nothing would stop it.

As I lived in a backward place, I did not know of Dr. Fowler's Extract of Wild Strawberry.

I saved my last child, who is now eight years old, but I owe it to Dr. Fowler's Extract of Wild Strawberry. Had I known about it before I feel that I would have saved the others. I shall forever praise and bless it and will never be without it again."

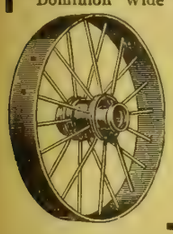
"Dr. Fowler's" has been on the market for over sixty-five years, and has a "world wide" reputation for curing all Bowel Complaints.

Do not be imposed upon by any unscrupulous dealer who wishes to substitute the so-called Strawberry Compounds for "Dr. Fowler's." Price 35 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

You Need These.

for heavy farm work. Dominion Wagons are light and strong. Save horses, save money. Light draft Best for rocky or muddy roads. Loaded half time of high wagons. Make one man's work equal two. Change to platform pattern in a jiffy, with ease.

Dominion Wide Tire Low Steel Wheels outwear 3 wooden ones. Cost less. Save ½ repair bills. No resetting tires. Fit any axle; built strong for roughest work. Won't break from cold or jolts. Write now for free catalogue.



Dominion Wrought Iron Wheel Co., Ltd., Orillia, Ont.

PILES CURED at HOME by New Absorption Method

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Read every add in this issue. They will interest you.

lished herd by visiting the breeder and selecting them in their normal condition. They should resemble the boar and be bred along similar lines. The special points to be observed in selecting the sows are size, quality and finish.

Good, strong backs are of supreme importance. Weak backs should be shunned. The sow's face should be smooth and broad between the eyes, and gradually taper towards the end of her nose. She should have straight side lines, smooth shoulders, and possess symmetry and style, have a kind disposition and be an easy feeder and prolific.

It is a mistake to order foundation stock by mail, and order a few sows and a boar not akin. The chances are that right at the very beginning you will introduce a violent outcross and spoil the results years of systematic selection and mating to hold and keep in control a fixed type and prepotency. Fixed characteristics cannot be established and perpetuated by bringing together unrelated families of the breed.

What Western Sheep Breeders Will Do.

At the meeting of the Sheep and Breeders' Association of Manitoba, held June 1st, it was decided to hold three auction sales the coming Fall of grade sheep; one at Brandon, October 18th; one at Portage la Prairie, October 20th, and one at Winnipeg, October 22nd.

As sheep for this sale will be purchased by the Association, and will be limited to yearlings and two-year-old ewes, to be sold in lots of six, it will no doubt be the means of assisting in popularizing the breeding of sheep in Manitoba and eventually help to clean up some of the farms that require something of this kind. The Association will make the purchase of this consignment from some of the ranges in Alberta, as they consider that these sheep will be more suitable for Manitoba than eastern bred sheep.

The announcement some weeks ago regarding the proposed importation of breeding sheep has induced several persons interested in sheep breeding to write to the secretary of the Saskatchewan Sheep Breeders' Association, F. Hedley Auld, Regina, telling what they require.

The movement has aroused considerable interest in the question of sheep breeding. Some are of the opinion that in the sales of sheep that it is proposed to hold only grade ewes should be offered. Others would like to see only purebreds put in the sale. Certainly purebred stock is preferable if the farmers are prepared to pay the price, but as grade ewes can be bought on the ranges in Southwestern Saskatchewan at much less than the prices of purebreds it would seem to be a better plan to begin with grades, and afterwards improve the flock by the use of purebred rams of the breeds most suitable to the West.

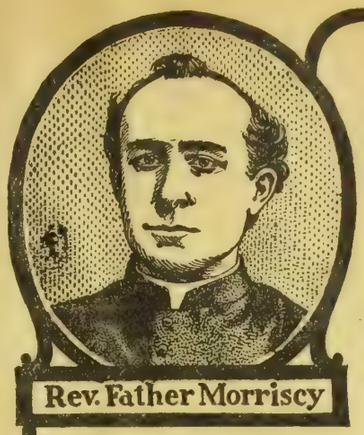
Owners of purebred sheep are being communicated with in order to ascertain what stock they have for sale. This information will be used in preparing a directory of breeders of purebred sheep in Saskatchewan, and will be useful to any person wishing to buy sheep privately.

The Ox Warble.

The ox warble is the larval or worm stage of a fly known by various names, such as the heel fly, striped hypoderma, grub or warble fly, etc.

This fly is found most abundant in the Southern States, while in the extreme Northern States very few or none are found. This fly has four stages; the egg, or ova, the larval, or worm, the cocoon, or pupal, and the adult, or fly. It was thought by early writers that the fly layed the eggs in the skin of the back of cattle This idea has long ago been proved to be wrong by Dr. Cooper Curtice. The writer has been able to confirm Doctor Curtice's story of the history of the various stages of this parasite, which is as follows: The fly lays the eggs, cementing them to the hair in the region of the heel of cattle, where, perhaps by the crawling of the minute larva, or worms, over the skin causes the animal to lick the part and thus gets the larva into the mouth. They now become lodged in the mucous membrance (lining) of the oesophagus anh here pass a part of their worm stage. The part in which they are imbedded is not inflamed and no serious injury is produced at this point. The worm at this stage can be found in this locality during the summer months. At this point they never reach a size greater than about a half inch in length and three-sixteenths in diameter. After passing this part of the life, they leave the oesophagus and find their way between the muscles; through the loose connective tissue, and become lodged under the skin in the region of the withers and down the spinal column. The question has often been asked: "Why do they lodge here?" I will answer that by asking: "Why a lung worm upon being swallowed and reaching the stomach finds its way to the lungs and will not develop in any other part of the body?" These tumors in the region of the back grow as the worm grows. At the summit of each tumor will be found a hole, which also grows as the tumor enlarges. In April and May, depending upon the latitude, they are fully developed and leave the tumor. This they are enabled to do from the fact that they are soft and contractile. It has been observed that most of them leave the tumors in the morning. They now burrow in the ground and form around them a cocoon in which they pass through the stage which brings them to the adult, or fly stage again. The length of time they are parasite in the animal is about ten months. The length of time in the ground, from four to six weeks, and the length of the life of the fly from two to four weeks, making the entire life history about twelve months

The warble in the back does not cause a great deal of injury to the host. Some irritation is at times manifested. The warble can be easily squeezed out by gentle pressure at the base of the tumor. The injury to the hide industry, in the cattle slaughtered that are "grubby", is considerable. Everywhere there is a tumor there is a hole, and when the hide is tanned, a larger hole results.—B. F. Kaupp, Colorado Agricultural College, Fort Collins.



Rev. Father Morriscy

Why Not Get Rid of That Catarrh?

There are few people in this extreme and changeable climate who have not at least a touch of nasal catarrh.

Yet because in itself it is not very dangerous most people put up with it, in its first stages, as a matter of course, till some day they wake up to the fact that the trouble has crept down to the lungs, or perhaps, through swallowing the phlegm, to the stomach.

Besides being dangerous in this way, catarrh is most disagreeable to oneself and others.

Father Morriscy's No. 26

is a combined internal and external treatment that has cured, and will cure, the most stubborn cases.

The tablets, taken three or four times a day, purify the blood and help to throw off the disease, while the antiseptic, healing salve, applied up the nostrils, cleanses the diseased parts, heals, and completes the cure.

Now is the very best time to get No. 26 and start to get rid of that catarrh.

Combined treatment 50c. at your dealer's. 110

Father Morriscy Medicine Co., Ltd., - Chatham, N.B.

Summer Water Supply

During the hot summer months, more than usual care should be exercised in regard to the water supply in the pastures. Insufficient or impure water for a few days will affect the herd injuriously, to almost the same extent as would exposure to the most severe blizzard of winter. This is noticeable not only in the quality and quantity of the milk, but also in the general conditions of the animals.

Be sure and take a bottle of Chamberlain's Colic, Cholera and Diarrhoea Remedy with you when starting on your trip this summer. It cannot be obtained on board the trains or steamers. Changes of water and climate often cause sudden attacks of diarrhoea, and it is best to be prepared. Sold by all dealers.

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING, ARGYLE ST.,

Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application TELEPHONE 1905.

Kendall's Spavin Cure

The cure that saves horsemen and farmers millions of dollars every year.

It is known the world over as the one certain, reliable remedy for Spavin, Curb, Splint, Ringbone, Bony Growths and any Lameness.

Cases just developing and old, stubborn sores and swellings readily yield to the wonderful curative powers of this famous remedy.

Orangeville, Ont., Dec. 21, '08

"We had a horse which was getting very lame on account of a Spavin. I was anxious about him as we could not work the beast when we most needed him.

Our teamster saw Kendall's Spavin Cure in the store and tried it.

I am pleased to say he had success as the horse has stopped limping and is doing his day's work."

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THE HORSE.

How to Pick a Brood Mare.

In selecting a brood mare, the character, symmetry, style, constitution, soundness and type are of even greater importance than pedigree. It is well to have a type of perfection in one's eye and to get as near that as possible.

It is a matter of controversy which is the most important of all these points; some breeders seem to lay more stress on having one point right, and some another. We remember one successful old breeder who would sacrifice almost any other point to have feet and fetlocks right.

In a brood mare a strong, healthy constitution is of the utmost importance. The long, low, wide sort, with well sprung ribs and plenty of middle, room to carry a good dinner bag, wide in chest, and thick through the heart, affording ample room for heart and lungs, plenty of width in hips and thighs, also essential in a brood mare, are some of the main points which indicate a good constitution.

The feet and legs are most important points, and it is well to begin our examination there. The feet must be strong round the coronet—of course, free from ring bone, side bone, sand crack, thrush, corns or canker—wide at the heels, hard in the hoof, and a wide open concave sole; set true and straight under her; pigeon-toed or splay-footed mares are very objectionable. The fetlocks should be nicely slopped, and of medium length; if too long there is a tendency to weakness, and if too short the action is stiff and wanting in spring. Very upright pasterns are objectionable, as they do not stand the wear and tear of the hard road, and very flat, low-set fetlocks are wanting in strength when hard-pulling is required. The bone under the knee should be dense in character, flat in form, and as big as it can be got, although size of bone is perhaps not so important in the mare as in the stallion. The knee should be prominent, big and strong, not set back at all; the hock of great width when looking broadside at the mare, and clean and narrow when taking a hind view, also set well together. Hocks set wide apart should be avoided. The muscle of the forearm and thighs should be strong and well developed.

A correct curve of the hind leg is an important point. Cowhocks are always weak at a pull, and very straight hocks are apt to develop spavins. The feather should be long and silky, free from hardness or curling.

The head and eyes should betoken docility, intelligence and courage. It is only by observation that anyone can acquire the art of recognising character in a mare. No amount of descriptive writing can teach one how to judge these characteristics in horse or in man. The loin, of course, should be strong, and the tail set well up, in line with the back, not drooping. Such is a brief description of the style of animal to have in one's eye and to aim to get as near it as can be, but, of course, bearing in mind that there is no such thing as a perfect horse. As for size, a mare standing 16 hands high and built in proportion is big enough. Color may be selected according to taste, but a brown or bay-colored animal is always more saleable than a black or any of the lighter colors.

Distemper in Horses.

Distemper, or strangles, is a disease principally affecting young horses. It is due to a germ belonging to the streptococcic group. The disease is accompanied by high fever, catarrhal inflammation of the mucous membranes, especially of the nasal passages, and as a result of this condition a discharge from the nose. There is a swelling of the lymph glands under the jaw, which later results in abscess formation.

A horse with distemper can communicate it to a healthy one.

The germs are found in the discharge from the nostrils and in the puss from the abscess which forms under the jaw and later breaks.

The majority of cases of distemper occurs before the age of 5 years.

The constitutional disturbances caused by the shedding of the teeth, and cutting same, as well as impure air in poorly ventilated stables, over worked and poorly fed animals are factors that weaken the resistance and make infection possible to produce the disease.

The disease is more common in the spring and fall of the year, particularly the former, on account of the chill received at these seasons of the year.

The disease can also be transmitted from dam to offspring through the milk.

The animal usually developes the disease in from three days to three weeks after being exposed to the contagion.

Animals affected with distemper should not be sold. Young animals should not be brought in contact with those affected, nor watered out of the same bucket, nor come in contact with any other property until it has been thoroughly disinfected. An animal should not be castrated while suffering with strangles.

A vaccine made from the specific germ causing this disease is prepared in the laboratory of the veterinary department of the Colorado Agricultural college.

This vaccine is very useful in combatting distemper, both as a preventive and as a cure, and promises to be of as great value as the anti-suppuration vaccine made in the same laboratory from the germs which cause poll evil, fistula and wound infections.

Like the anti-suppuration vaccine, to get the best results it must be by one who is trained in the diseases of the lower animals and understands the use of vaccines on same. It is, therefore, advisable to have it used by a competent graduate veterinarian.

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Forest Henry, one of the Farmers' Institute workers in Minnesota, and a successful farmer, says that his experience teaches that the time to wean the colt, even if not more than 3 months' old, is before going into the harvest field with the mare. He teaches his colts to drink skim milk and to eat oats with the mare before weaning. But in feeding skim milk caution is used on Mr. Henry's farm at first, and the amount of milk is limited to two or three quarts a day. After a few days the amount is increased at each feeding time. Oats and wheat bran are fed the colts quite freely. Second crop clover, free from mold, is excellent hay for the colts. Provide plenty of exercise with access to shelter. Darkening the stall during fly time through the day and turning the colts out at night is a good plan to follow. When the flies are gone and cold weather approaches reverse the scheme by sheltering at night and giving exercise through the day.

Hay for the Horse.

The agricultural authorities both of North Dakota and of the Minnesota Experiment stations agree that a pound of hay per day per hundred pounds of weight of the horse to which it is fed is sufficient. Over feeding of hay results frequently in heaves and indigestion. It is advised to limit the amount of hay a work horse is given to avoid serious results consequent upon working on too full a stomach. Colts, however, may be fed all the hay they will eat. —University Farm Press News.

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POULTRY.

Prevention and Destruction of Poultry Parasites.

FLEAS.

Fleas are only found where dirt prevails, as in dark, unclean, and badly ventilated houses. They spend the day beneath the straw or rubbish in the nests, in crevices of the walls, or beneath any convenient shelter. At night they make their way to the fowl to obtain nourishment.

The adult flea is small, dark brown in color, and very active. The female lays her eggs in any of the places where fleas are to be found during the day, or even in refuse or manure that may be on the floor.

Fleas have sharp piercing jaws by means of which they bore into the flesh and draw the blood upon which they live. The strength of birds infested with fleas is consid?rably reduced through this loss of blood. Severe irritation of the skin is also produced. In the case of chickens fleas cause stunted growth, if not actual death from weakness. Sitting hens frequently are compelled to forsake their nests on account of the intense irritation produced by the persistent attack of fleas.

MITES.

Mites are quite distinct from fleas or lice and are much smaller.

There are numerous species of mites, but the red mite is the most troublesome, and is the only one to which reference will be made in this article.

This mite varies in color from pale yellow to dark red; it multiplies with exceeding rapidity, and not only poultry, but horses, cattle, and goats are liable to its attacks. For this reason, fowls should not be kept in stables along with other farm animals, but in a poultry-house which can be kept scrupulously clean.

During the day the mites shelter in convenient crevices in the walls, nests, floor, and particularly on the underside of the perches when they are rough or covered with bark.

Mites have piercing and sucking mouths, by means of which they penetrate the skin of their host and fill themselves with blood. Birds are chiefly attacked at night when perching or sitting on the nests.

Mites injuriously affect fowls in the same manner as do fleas. They prey upon their host chiefly at night time, and therefore the remedial and preventive measures to be adopted against both are practically identical.

PREVENTION AND DESTRUCTION OF FLEAS AND MITES.

Unless fowls are housed satisfactorily, it is useless to attempt to keep them free from vermin, and it must be remembered that the presence of insect parasites means loss. The loss may not at first be evident but in the end profits are sure to be reduced. The house, therefore, must be kept clean, and should be well lighted and ventilated.

The following rules, which are simple and inexpensive to practise, should be strictly enforced:—

1. Keep the poultry house quite clean, and provide for lighting and ventilating if arrangements for such do not already exist.

2. Thoroughly limewash the walls and all the fixtures of the house at least three times a year. A small quantity of soft soap thoroughly mixed into the liquid renders it more adhesive. A thin wash will penetrate into the cracks and crevices, and if a little paraffin oil has been added it becomes much more effective.

3. The perches should be planed quite smooth, and on no account should branches of trees which are covered with bark be used. The perches should be erected so as to be readily movable, and the sockets into which they fit should frequently be soaked with paraffin. When the house is being lime-washed the perches should also be treated.

4. Clean out the poultry-house daily and scatter powdered lime over the floor and perches. That is, perhaps, the most important point to be observed in combating the ravages of parasites and disease.

5. The nests should under no circumstances be permanently fixed, but should be readily movable. Cheap structures, such as empty orange boxes, are very suitable. These, when they become dirty, can be removed and burnt, and new boxes supplied. Powdered lime should be scattered around and beneath the nests, and no refuse of any description allowed to accumulate.

6. The materials in the nest boxes should be removed weekly and destroyed. Wood shavings are preferable to hay or straw.

7. As already indicated, poultry should be provided with a separate house, and not allowed to roost in stables.

BIRD LICE.

There are at least eight distinct species of lice occuring on fowls. In color they are usually dull white, pale yellow, or brown, and in size they vary from one-sixth to one-third of an inch in length. On affected fowls these parasites can readily be seen by turning back the feathers; they are most commonly found on the neck, beneath the wings, between the legs, and particularly around the tail.

Lice have biting and chewing jaws. They feed upon the products of the skin, barbs, and parts of the feathers. It might be supposed that as these insects do not live upon the blood of their hosts serious injury would not arise, but such is not the case.

Lice cause loss in several ways, chiefly through biting the skin and setting up severe irritation. Thus annoyed, the fowls become unthrifty. They cannot rest either during the night or day, and weakness and debility are the result. Laying hens lose their healthy appearance as the lice multiply, and their yield of eggs steadily diminishes. The irritation is particularly bad in the case of setting hens, and, as when attacked by fleas, they are eventually driven from the nest, and eggs are lost.

Yodng chickens brooded under hens infested with lice soon become similarly attacked, and are injuriously affected by parasites. This is evident from their unthrifty appearance, stunted growth, undue susceptibility to disease, and, not infrequently, from death through general debility. The head and throat of chickens are the parts most commonly affected.

Lice may be spread in various ways, the chief source of infestation being the introduction amongst clean fowls of infested specimens, especially male birds. During copulation the lice readi,y spread to the hens. Unclean nests are a potent factor in distributing lice from one hen to another.

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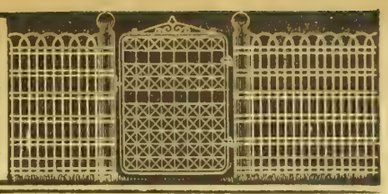

PREVENTION AND DESTRUCTION OF LICE.

It is probable that if measures suggested for the destruction of fleas and mites were strictly complied with attacks from lice will be unknown.

The fowls should be kept perfectly clean, in suitable houses which are frequently lime washed; the perches should be smooth and movable, and the nests particularly should be kept clean, made easily movable, and destroyed after being in use for some time.

For fowls already infested with lice additional remedies must be adopted, viz:—

1. Dust baths should be provided for the adult poultry. If the fowls are at liberty they usually are able to find suitable places in which to dust themselves; but if they are kept confined, a box should be placed in the run and filled with road dust, dry sand, soil, or coal ashes. Fine dust is fatal to lice, and the drier the dust the more thoroughly can the fowls dust themselves. For this purpose the box should be placed under cover, and in a dry sunny part of the run.

2. Adult fowls should be thoroughly dressed with flowers of sulphur, or some effective insect powder such as Persian insect powder (Pyrethrum). This operation can best be performed by holding up the fowl by its legs and shaking the powder in amongst the feathers, which will open outwards. It is necessary that the powder should reach the skin of the bird; and the parts around about the tail between the legs, beneath the wings, and along the sides and back should be specially well dressed.

3. Adult fowls may be dressed with an ointment composed of one teaspoonful of flowers of sulphur and an ounce of lard, but on no account should this be applied to young chickens.

4. Young chickens hatched under hens should have a little pure lard rubbed on their heads and throats. This kills the lice by obstructing their breathing pores. After a few weeks a little lard might be rubbed in under the wings of the chickens.

5. It is very important that all nests should be kept clean and frequently dusted with lime or insect powder.

To sum up, fowls can never be free from insect parasites unless their houses, nests, and runs are kept perfectly clean. Overcrowding should be carefully avoided. Insect attacks lower the general vitality of the system and render fowls more liable to contract disease. A loss of vigor entails slower growth and reduces egg production, and consequently smaller profits. To obtain the best results it is essential, therefore, that unceasing attention should be paid to the prevention of the attacks of parasites.—Bulletin by Department of Agriculture for Ireland.

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THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Aunt Tabitha's Fireside.

(Continued from last issue.)

"An address on edication, did you say?"

"Yes, don't you remember?"

"What was the schule-master's name?"

"Jeemes Crane. His father sent him to college, and he'd jest graderated, so the committee hired him to keep our schule."

"I remember Jeemes,', said Mrs. Dawkins. "When he fust came out of college, he thought he was the biggest man in the place, but, arter a while he found out his mistake."

"So do I remember him," said Aunt Tabitha. "Jacab means the time when Deacon Smalley's dog figured so largely, I s'pose."

"Yes," replied Mr. Dawkins, "that is the very time. The address was delivered in the new meetin'-'us."

"I remember all about it, now," said Aunt Tabitha. "Well, to begin at the beginning, I may as well mention that, so far back as that, the parish was kind of poor, and, arter gettin' the clapboards, and shingles, and nails, and glass, there wasn't anything left to get the wherewithal to put the pews into the meeting house, nor to build the singer-seats with, so the congregation was obliged to put up with seats made of a few boards propped up on blocks of wood, the fust year. We thought we did purty well to get a pulpit fixed out in decent shape, and fly round as brisk as bumble bees to do it, women folks and all. I can remember as well as ef 'twas no longer ago than yesterday, that Patty Pilsbury and I went to Sam Wallinford's store, over to Oak Village—Sam's was all the store there was within a dozen mile of here then—and bartered away two whole churnin's of butter, seven dozen of eggs, ten quarts of blueberries, and a bushel of wheat for enough green maroon to make a cutting dor the pulpit winder and the cushion to lay the Bible and psalm-book on.

"Well, Deacon Smalley and his wife, gin'rally speakin', used to go to meetin' in their shay, for they lived so fur off that they couldn't go home at noon if they walked. Now it so happened that one of their neighbors wanted to go a journey, and as he didn't own any shay, and wanted his darter to go with him, he went and asked the Deacon to lend him his. He forgot all about its bein' the day that Jeemes was to deliver his address, and I don't s'pose but what he would have lent it ef he hadn't, for the Deacon, and his wife, too, were turrible obleegin, sort of folks. Mr. Palmer, the man that borrowed the shay, hadn't got out of sight when they remembered that they should want it that day.

" 'Never mind,' said Miss Smalley, 'we can go afoot; that is, ef you think you can help, carry the baby.'

" 'I guess, ef I try, I can not only help, but carry him all the way.'

"David was the only child they had then, and, he was only about a year and a half old, Miss Smalley thought 'twas best to carry something for him to eat, so as to keep him quiet. As he lived mostly on milk, she put some in a tin dipper, 'cause she didn't like to carry an aitthen thing, for fear 'twould get broke, and crockeryware didn't grow on every bush, them days. When she got to the meeting house, she took a seat all by her self, close up to the pulpit, seein' she had a child to take keer on, and, throwin' a cloth over the dipper of milk, she sot it under the seat.

"Now the deacon had a little yaller dog—the dog's name was Watch—that al'ays follered him everywhere he went, on'y to meetin'. He didn't allow him to go there, and the dog knew it, but he was as cunnin' as a fox, and contrived to foller at such a distance as not to be found out, sometimes. Psalm-books and hymn-books were rather sca'ce articles in them days, and, besides the minister and deacon, I don't believe there was a single person in the meeting-house that owned one, except Patty Pilsbury and me; so, in the sca'city of books, arter the minister had read the hymn, the deacon al'ays had to line it for 'em to sing.

"As ill luck would have it, the man Deacon Smalley lent his shay to was the one that allays pitched the tune. 'Twas thought best to begin by singing, the same as the services were begun Sabba'day, or 'twouldn't 'ave been any matter. Well, arter the hymn was read, the Deacon give out the two fust lines. I don't remember what the fust line was, but part of the second was, 'And dig for golden ores.' Jeemes Crane picked the hymn out, 'cause, as he said, that diggin' for golden ores might, in a figurey sense, be s'posed to be the same as digging for science and all the highest kinds of learning, and, as the address was to be on edication, it would be kind of 'propriate.

"You know, Jacob, and so does Darcus, that Deacon Smalley wasn't the best reader in the world, and, as to that, it wasn't to be wondered at, for he never had any great chance to get learning of any kind. So, ginerally, he used to find out beforehand what hymns were going to be sung, so that he might have a chance to look them over; but that day he didn't find out in season. I could see in a minute that he was king of puzzled, for he kept turnin' his book so as to have the light strike fair on the page, and drawing his fingers over his forehead, as if he had some idee buried there, and he was tryin' to rake it out. Arter a while, he fetched a long breath, as ef his mind was relieved and then he cleared his throgt and begun. I wish I could remember the fust line, but I find I can't, so there's no use in trying. At any rate, instead of reading, 'And dig for golden ores,' he read, 'And dig with golden hoes.'

"Them that didn't have any books thought 'twas all right, I s'pose, but Patty Pilsbury, who sot next to me give my elbow a jog and says she jest loud enough for me to hear: 'I guess Smalley's mind is running on farmin' instead of edication, this morning partic'lar diggin', pertaters.'

"I had hard work to keep my countenance while the Deacon was waitin' for somebody to set the tune, but nobody sounded a note.

"Isn't there some person present says he, at last, 'that'll pick out a sootable tune for the occasion, and pitch it?' Not a single soul stirred or moved. You might 'ave s'posed that everybody had turned into so many statutes. 'Come, Miss Pilsbury,' said the Deacon, speaking to Patty, 'can't you strike somethin'? You know every tune in the singin'-book, besides a good many ranthems and the others will soon j'ine you, ef you on'y make a beginnin'.

"I don't know whether Patty would 'ave mustered courage enough to accept his invertation, or not, for jest as he'd done speakin', there was one of the queerest noises, and, at the same time, kind of doleful like, that ever assailed my ears, as Jeemes Crane said, when he was speaking about it afterwards. My fust thought was that somebody had ondertake to strike a tune, and getting kind of frightened like, had broke out into that terrible, doleful, distressed, and dismal noise, that sounded some thing between a howl and a whine. Old Miss Keeser, who was naterally narvous, was so skairt that she jumped right off her seat, threw her arms up, and screamed right out.

"But we soon found out what it was, for the Deacon's little yaller dog made his appearance, with his head squeezed so hard into the dipper of milk Miss Smalley had put under the seat that he couldn't for the life of him, get it out again, and so he went the whole length of the aisle, making that onairthly noise, and thumpin' the dipper on the floor every step he took.

"You know that Mr. Smalley was rayther young for a deacon, and so he thought that it behooved him to kinder stand on his dignity; so, instead of goin' and liberatin' the dog, as I knew he wanted to, he stood as stiff as a stake, put on a dreadful long face, and looked as grave and as stern as if he was a judge. At last, he couldn't bear it any longer, and says he: 'Won't some of the youngsters present pull the dipper off that dog's head, so that we can go forrard with the sarvices of the day?'

"With that, four or five boys that sot near the door sprung up, and one of 'em took Watch and carried him out of the meetin'-'us, and the rest follered arter. They made out to set the poor dog at liberty somehow, I never knowed exactly how. At any rate,, ever arterwards he took a great dislike to anything made of tin, partic'larly a tin dipper. Miss Smalley told me that she could never arter that make him eat or drink out of any kind of a tin vessel, and that he was as afraid of pewter or of anything shinin' as he was of tin.'

"Did you have to give up singing?" inquired Lizzie.

"No, indeed! Arter we'd got our faces straight and our narves kind of stilled down, Patty and I talked the matter over between ourselves and concluded that ef there wasn't a person in the meeting house that could pitch a psalm-tune, we were, take us by small and large, a set of poor critters; so we beckoned to Ruth Burbank—she had the best voice for counter that I ever heard. As I was sayin', we beckoned to Ruth, so she came over to where we sot, and we told her if she would sing the counter to old Stratfield, Patty would sing the air, and I would sing the treble. Ib

"Well, I will,' says she.

"Upon this, we all three riz, and begun to sing right off afore our courage had time to cool, and from that day to this I've never hearn any music that sounded so well to me as that did. Patty's voice was as clear as a bell, and as for Ruth's as it floated up among the oak rafters of the meetin'-'us, I never heard a skylark's, when it flew up from its nest, jest in time to catch the fust streak of mornin' sunshine on its wings, that was half equal to it. It brought two-thirds of the people to their feet afore they knew it, as they arterwards said. We kept on till we sung the four first lines, so as to give the Deacon time to gather up his scattered idees, and then he went on and lined it regularly, so that whoever had a mind to could j'ine; and I don't think there was a single pairson, man, women, or child, that had any pretensions to a voice for singin' but what struck right in. Somehow they couldn't seem to help it. As for the Deacon, the haze seemed to be cleared away from his mind, and he read the hymn equal to any minister. Singin' that hymn seemed to take the nonsense all out of us young ,olks, and for that day we thought no more about diggin' potatoes with goold hoes, nor of the dog with his head in the dipper."

"And what kind of an address on education did Mr. Crane give you?" inquired Paul.

"Oh, 'twas passable,'j replied Aunt Tabitha.

"One thing is sartin," said Mr. Dawkins, "it didn't lack for long, highflown words. I remember I went to see Darcus that evenin', and so we tried to pick out some of em' in the dictionary, but arter all, we wa'n't much the wiser for 't."

" 'Twould all done well enough," said Mrs. Dawkins, "ef the highflown words had seemed to come in naterally and in the right place but they didn't. Towards the winding up, I remember there was one sentence in a partic'lar manner that made me think of a great starin' red patch on the back of a black coat "

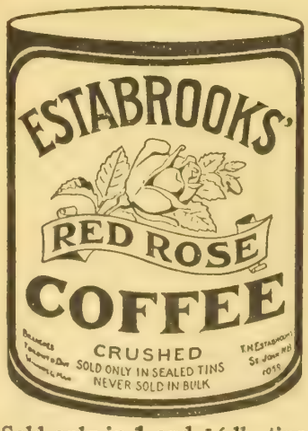
"Paul, do look at your watch," said Aunt Tabitha, "and see what time of day 'tis."

"Almost four," was his answer.

"Well, I declare, how fast time does run! Why, Darcus, what a workin' body you are! You've kept your fingers flyin' at yer knittin'-work, while I've done nothing but talk. Well, you and Jacob and Paul must do the talking' now, and Lizzie and I'll go and see about gettin' tea."

THE END.

Estabrooks' Coffee is full of snap and fine flavor. It gives genuine satisfaction to the last drop, and brings back the cup for more. It is as uniformly good as Red Rose Tea. It does not contain an atom of chicory, nor any other adulterant. You will certainly enjoy it.



Sold only in 1 and ½ lb. tins.

Try it for breakfast to-morrow

73

The Standard of Piano Construction

The question of quality is the only one which should be considered when buying a piano.

The beauty and permanency of tone—delicacy of touch—superiority of materials and workmanship—are synonymes of quality.

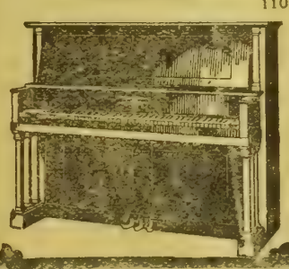
The recorded judgment of eminent musical experts is—that the New Scale Williams quality is the standard of piano construction.

New Scale Williams

You will find our new Catalogues of vital assistance in selecting the best piano for your home. We will send these free on request, and also explain our plan of easy payments, if you care to purchase a New Scale Williams Piano in that way.

THE WILLIAMS PIANO CO. LIMITED
OSHAWA. Ont.

110



THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

How to Make Farm Hands Tidy.

At a meeting of the Woman's Institute for the benefit of farmers' wives a paper was read on the artistic decoration of the home, and especial stress was laid upon the wife's having a dainty table. It was written by a woman whose home was luxurious and whose taste was exquisite, says The Delineator for April.

"But," asked one woman, "how can I have a 'dainty table? I have ten in the family—four children, four hired men most of the time, and my husband and myself. The hired men are generally foreigners, hopelessly untidy. It is all I can do to get them to wash their hands and faces and comb their hair before they come to the table. I cannot set a separate table and get through with my other work. How can I manage to have a 'dainty table?' The men soil the table-cloth and wipe their mouths on their sleeves, and I'm—well, I'm just discouraged. I tried furnishing them napkins, but I would have to give them fresh ones at each meal in order to keep them decently clean. That meant more washing than I could do, so it was out of the question." And the speaker's eyes filled with tears, for this was one of her unsolved problems.

"Well, sister, I'll tell you how I manage," smilingly answered a bright faced woman. "In the first place, I put a wash-stand covered with white oilcloth, with a pitcher and bowl and tin slop-jar, out in the back entry. I hung up a mirror, brushes, combs and nail-cleaner (I bought them at the ten-cent counter) also a long roller towel, a shoe-brush, a small broom, and a big piece of soap. Then I said to the men, 'This is your dressing-room. You must make yourselves tidy before coming to the table. In the house I make the rules, and if you do not comply with them I shall fine you five cents for each transgression, and deduct it from your wages."

Chocolate Icing.

A black chocolate icing that is smooth and soft without being sticky is rather hard to find but the following one is excellent of its kind and is specially good on white cake or on small cakes. Melt gradually, so it will not scorch, four tablespoonfuls of grated or scraped chocolate. When melted stir in three tablespoonfuls of milk or cream and one of water. Mix well and add one scant teacup of sugar. Boil about five minutes. Stir only enough to keep it from burning. When the cakes are nearly cold ice with this icing, using as warm as possible only allowing it to cool enough so it will not run.

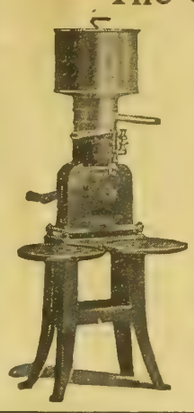
Baking Day Convenience.

A baking day convenience is made of two holders sewed on a tape. Have the tape about a yard long, sew a holder on each end and when in use slip it through the apron band on the right side. It is always in place and, being loose, can be slipped back and forth as it is needed.

When the digestion is all right, the action of the bowels regular, there is a natural craving and relish for food. When this is lacking you may know that you need a dose of Chamberlain's Stomach and Liver Tablets. They strengthen the digestive organs, improve the appetite and regulate the bowls. Sold by all dealers.

THE DOMO SEPARATOR

The Cheapest and the Best.



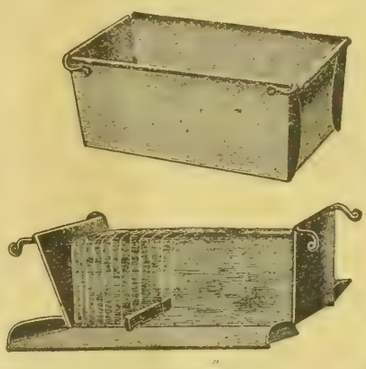
Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties.
For particulars of Free trial offer write to

J. de L. Tache,
General Canadian Agent, St. Hyacinthe Que.

Agents Wanted all over the Maritime Provinces



New Bake Pan!

Cannot burn, air chamber underneath. Excellent for loaf cake or pressed meats. Need not remove bread to cool. Simply let down sides of the pan and make clean cut with knife or remove without breaking. Will last a lifetime. Sent postpaid on receipt of **42c** stamps.

FREE—A useful article will be given free to any housewife for five minutes of her time.

Address, for particulars,
EDWIN J. TUCKER,
MIDDLETON, - - N. S.

Famous Fleury Plows

Lightest in Draught! Steadiest in Running!

And doing the finest quality of work in the field. We are the ORIGINAL makers of Plows "DANDY," **21, 13** and **15a** (One Horse), and

Famous Tinkler Wheel Plows

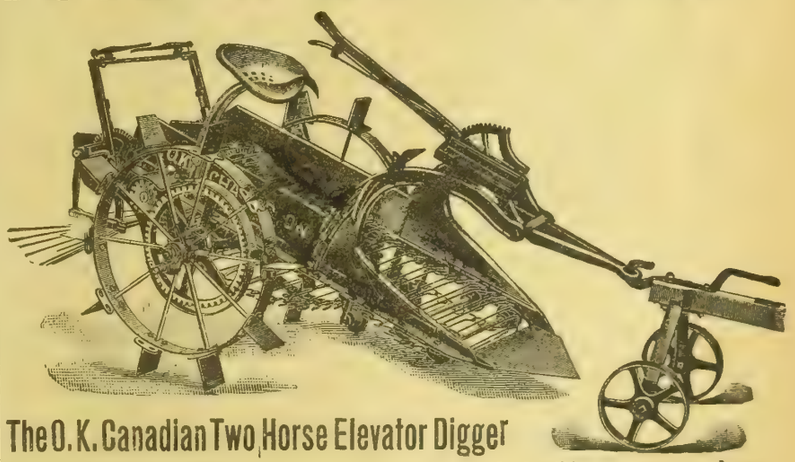
Do not take IMITATIONS. Insist on the GENUINE FLEURY.

J. FLEURY'S SONS, - Aurora, Ont.

Medals and Diplomas: World's Fairs, Chicago and Paris.

General Agents for N. B.—J. CLARK & SON, - Fredericton, THE LOUNSBURY CO., Newcastle.

POTATO MACHINERY!



The O. K. Canadian Two Horse Elevator Digger

will dig your crop and do it well. If you are in need of a Digger, you can do no better, than secure one of our machines.

Write for our illustrated Catalogue and Prices.

Canadian Potato Machinery Co., Limited
GALT, - - - - - ONTARIO.

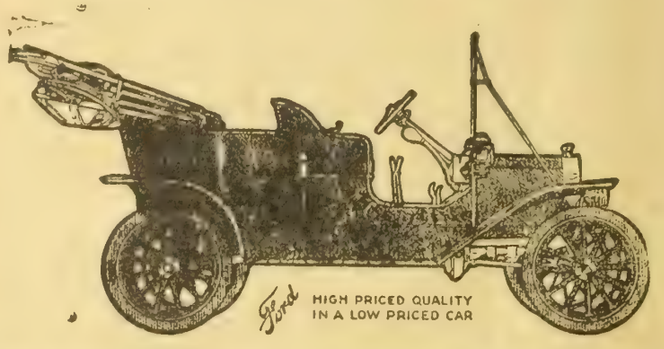
Now is the Best Time to Enter.

FREE $11,000 in Prizes FREE

Will be Given Away by

The Maritime Farmer, The Halifax Herald and The Evening Mail

First Grand Prize in Each District



$1250 FORD TOURING CAR.

The Object of This Great Voting Contest.

Primarily the object of this great prize contest is to secure new paid-in-advance subscriptions to **The Evening Mail, The Halifax Herald** and **The Maritime Farmer,** while doing this, to ascertain who are the most ambitious, energetic and popular men and women of this section. Resourcefulness, patience and get-there-quickly are the qualities developed in men and women every day by live competition. Competition is the life of success and it also makes achievement worth while. This contest means that the winners will be the kind of people who appreciate these things. It is a business proposition for men and women who love the excitement and attainments of business. Built on business principles, it is for business people.

There are many who do not receive as a six months' or a whole year's salary as much as what any of the Thirteen Grand Prizes, to be awarded in this contest amounts to. And the best part of it is that the competition which will bring such success in this big contest is only a good use of spare moments. It will be a campaign of votes by the candidates among the people with whom they come face to face—those whom they can reach by telephone and by writing letters; through the assistance of personal friends and the interest aroused in the public. In a word, it costs nothing to participate in this contest.

The $11,000 in prizes to be distributed under the terms of the contest is by far the most liberal offer ever made by a newspaper in Eastern Canada and British North America.

NOMINATE YOURSELF TO-DAY.

DISTRICT PRIZES

Three Diamond Rings, Three Cream Separators, Three Canoes, Three Bicycles, Three Gramaphones, Three Steel Ranges, Three Cameras, Three Kitchen Cabinets

Vote Value of Subscriptions and Prices

For cut of Second Grand Prize in each district see page 683
For cut of Third Grand Prize in each district see page 681

DECLINING VOTE SCALE.

Votes will be allowed on all paid-in-advance subscriptions during the Three Periods of this Contest, as follows :

FIRST PERIOD.

July 28th to August 20th.

(Club) The Halifax Herald and The Maritime Farmer.

	Votes.	Price by Mail.
6 months	3300	$ 2.90
1 year	9000	5 80
2 years	22000	11,60
3 years	38000	17.40
5 years	75000	29.00

(Club) The Evening Mail and The Maritime Farmer, outside the city of Halifax and Dartmouth.

	Votes.	Price by Mail
1 year	3200	$ 2 80
2 years	8800	5,60
3 years	18000	8 40
5 years	35000	14.00

SECOND PERIOD.

August 22nd to September 3rd.

(Club) The Halifax Herald and The Maritime Farmer.

	Votes.	Price by Mail.
6 months	2500	$ 2.90
1 year	7000	5.80
2 years	16000	11.60
3 years	28000	17.40
5 years	65000	29,00

(Club) The Evening Mail and The Maritime Farmer, outside the city of Halifax and Dartmouth.

	Votes.	Price by Mail.
1 year	2400	$ 2.80
2 years	6800	5.60
3 years	12000	8 40
5 years	25000	41,60

THIRD PERIOD.

September 5th to Sept. 17th.

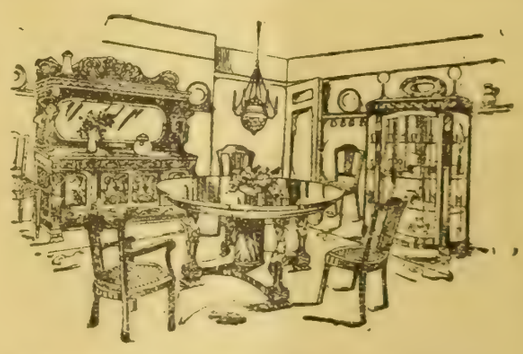
(Club) The Halifax Herald and The Maritime Farmer.

	Votes.	Price by Mail.
6 months	2000	$ 2.90
1 year	6000	5.80
2 years	14000	11.60
3 years	26000	17,40
5 years	56000	29.00

(Club) The Evening Mail and The Maritime Farmer, outside the city of Halifax and Dartmouth.

	Votes.	Price by Mail.
1 year	1800	$ 2,80
2 years	5800	5,60
3 years	10000	8.40
5 years	20000	14,00

Fourth Grand Prize in Each District



$200 Suit of Furniture.

NOMINATE A CANDIDATE.

Nomination Blank—Good for 1,000 Votes.

GREAT PRIZE CONTEST

—OF—

The Halifax Herald and The Maritime Farmer

I NOMINATE.....

ADDRESS.....

'PHONE.....

SIGNED.....

ADDRESS.....

Only the first nomination blank cast for each candidate will count as 1,000 votes.

Cut out and send to the Contest Manager, The Herald or The Maritime Farmer, Herald Building, Halifax.

INFORMATION BLANK

Contest Manager,
The Herald and The Maritime Farmer,
Herald Building, Halifax,

Please send me detailed information concerning **The Herald and The Maritime Farmer Great Prize Contest,** and method to be pursued to win one of the many valuable prizes.

NAME.....

STREET and No.....

TOWN.....

Cut out and send to the Contest Manager, The Herald and Maritime Farmer, Herald Building, Halifax.

'Phone 1956, or Address all Communications to

CONTEST DEPARTMENT, - Halifax Herald, - Halifax, N. S.

CHINESE STARCH

This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

For Sale to the Trade by
MESSRS BAIRD & PETERS, St. John, N. B.

OCEAN MILLS, Mount Royal and Lasalle, - Monreal. Que.

Farm Problems.

Unpregnant Mare Giving Milk.

W. D. S., Anagance, N. B.—I have a mare that is giving milk although she never had a foal. She has a bag the same as if she had recently dropped a foal. She had the service of a stallion about the 5th of April, 1910 and again on the 22nd June. I have been obliged to milk her several times since the last breeding. She is in seeming good, healthy condition, and her food is clover and grass.

1. What would be the best food to give her?
2. Will driving hurt her while under treatment?
3. What treatment should I give her?
4. Where had she better be kept, in stable or pasture?
5. Is there any danger of complicated diseases setting in?

Ans.—Mares, occasionally, develop mammae and secrete milk although not pregnant. However, this query could be more satisfactorily answered if W. D. S. had stated whether or not the mare had been bred in 1909 or early in 1910, as, sometimes mares will accept the horse during pregnancy and often when a foetus dies in utero, if not expelled in a few days, the dam's mammae will enlarge and milk may be secreted. A careful examination by a competent veterinarian would discover if a foetus is retained and give the necessary treatment.

1. The food given is suitable while idle. If mare is worked, oats, wheat and bran, sufficient to maintain her in a vigorous condition would be a desirable suppliment.
2. No, if not excessive.
3. Exercise for a few hours, twice a day. Do not milk unless the udder is hard and painful, but rub it gently twice a day, with an Anodyne Oil made by mixing half an ounce of Tincture of Camphor, half an ounce of Fluid Extract of Belladonna and eight ounces of raw linseed oil.
4. Either stable or pasture is a suitable place for her, but if she is in pasture, exercise will not be necessary.
5. No complicated diseases will set in if the above treatment is faithfully given.

J. STANDISH, V. S.

Colt Bled to Death.

B. W. E., Andover, N. B.—A few days ago, my mare dropped her colt two days after time due. I was with her at the time, and in a few minutes tied the navel cord three inches from body, cut cord one inch from tie and in a few minutes he was on his feet. This was at 8 o'clock in the evening. At 10 o'clock I went to see the foal and found him bleeding at the navel. I thought the string had become loose and retied it one inch above first tie and the blood stopped. He was strong and I left him sucking. At 2.30 o'clock, next morning I found him dead, the navel cord had bursted above the tie and he had bled to death. Kindly give me your opinion of this circumstance and some advice re the way to handle a new born foal.

Third Grand Prize in Each District

$400 UPRIGHT PIANO

Vigorous Manhood.

Two "Health Belt Men." One 50 Years Old, the Other 30. Can You Pick Out the Younger ?

I can show you how to restore your youth and how to keep it. A "Health Belt Man" CANNOT grow old; he must be young forever. Years count for nothing in this life, so long as you have great vitality. Weakness, Nervousness, Unmanliness are conditions to be laughed at by the intelligent user of my great appliance, for it gives in abundance, all that vim, vigor and nerve force which the weakened system craves—Worn every night and all night for two or three months, it sends a great, warm, glowing volume of electricity into your body through the nerve centres at small of back from the first hour's use you experience a decided benefit; there is a great mysterious force which gets right to work. No drugs to be taken; no conditions imposed except that dissipation must cease. Help Nature that much; the Belt will do the rest. It takes the weakness and kink out of your back; it drives rheumatic pains away from all parts of your body, you will feel and look young and strong again; women and man noticing your physical change will be more attracted toward you on account of your new vitality and life; in two months you can experience the full vigor of perfectmanhood, or you need not pay.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it don't do the work.

Let Me Send You These Two Books FREE.

They fully describe my Health Belt and contain much valuable information. One is called "Health in Nature," and deals with various ailments common to both men and women, such as rheumatism, kidney, liver, stomach, bladder, disorders, etc. The other "Strength," is a private treatise for men only. Both sent upon application, free, sealed, by mail.

If in or near this city, take the time to drop in at my office that you may see, examine and try the Belt. No charge for advice either at my office or by mail. If you cannot call, fill in the coupon and get the free booklets by return mail. They are better than a fortune for any one who needs new vigor.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sir:—Please forward me your books, as advertised, free.

NAME.....

ADDRESS.....

When writing advertisers please mention this paper.

Ans. It requires some knowledge of the umbilical cord to understand this condition. The cord is composed of three blood vessels, two arteries and one vein. They are covered by a layer of soft tissue generally ruptured at or shortly after the delivery of the foal. Very rarely, when naturally ruptured, does it require tying, but when it requires to be cut it is advisable to tie with a soft string, one or two inches from the body. Have the string soaked in an antiseptic solution such as a three per cent. solution of creolin or carbolic acid in water and tie the string only tight enough to squeeze the walls of the vessels together and prevent the blood from flowing out of them. If the string be a hard squeeze rhe soft tissue partly off one and drawn very tight it may and allow the blood to escape which suppose was the condition in B. W. E's. colt. st is advisable to dress the navel two or three times a day with the above advised antiseptic or any other good one to prevent infection at that part. The dressing should be continued until the navel heals.

J. STANDISH, V. S.

NOTICE TO SUBSCRIBERS.

All subscribers who paid either F. W. Cox or C. W. Brewer for the Maritime Farmer and have not had an acknowledgement of same direct from our office will confer a favor if they will send receipt to us. We will protect all such and will forward a new receipt. We cannot protect you unless we get the original receipt given by either of these parties.
SEND AT ONCE.

A New Invention in Mowers.

At the exhibition just being held at th? city of Gjovik, Norway, considerable attention is attracted by a new style of a mower constructed by an engineer, M. Bjering. The invention is orginally a result of Mr. Bjering's efforts to construct a mower for hand-power, and the result is the principle after which the one-horse mower now exhibited is built. On the old style of mowers the power is transmitted by cogs or chains, while on this new mower this is done through levers and springs, that appear to be very simple and easily managed. The new mower runs so much more easily, that it is astonishing. The cutting mechanism is also different, being constructed on the scissors system, instead of with knives. The mower has a far larger cutting power, for which reason the enormous speed of the cutting bar is reduced by one-third as compared with the old style and this saves considerably in pulling-power, so that a man can easily pull a one-horse mower at work.

The intention of the inventor is to make mowers for hand power only, and it is said that he is guaranteed a sale of 20,000 such mowers yearly to France alone. Patents are being taken out in all countries.

C. E. SONTUM.
Trade Commissioner, Christiana, Norway.

Cutting a Board.

The board was 10 inches and a fraction in width, and the carpenter's apprentice with his rule and a pencil was trying to divide it into three equal parts.

"Hang it," he said, impatiently, figuring away, getting bigger and bigger fractions, and still far from the accurate division that he sought. "Hang this business."

"Here's the way to do it," said the old carpenter.

And he took a foot rule and laid it across the 10-inch board obliquely, so that the oblique measurement just made 12 inches: Then he marked off three equal divisions, one at the 4-inch line, the other at the 8.

"You will find that divides your board quite accurately," he said. "It is the easiest way for a carpenter to make divisions. It works on any width or any number of desired divisions. To divide a 9 3-4 inch board in four parts, for instance, you'd make your rules measure obliquely just 10 inches across the board, and then you'd mark off your divisions at 2 1-2, 5, 7, 1-2. This is a handy thing to know. It saves a man many a quarter-hour of tedious ciphering."

Testing Butter by Babcock Test.

We do not recommend the testing of butter for fat by the Babcock test. The results obtained are inaccurate because the butterfat is such a large percentage of the butter that all the errors of analysis in sampling, weighing and measuring must be charged to the butterfat and this makes it impossible to get results which can be depended upon as accurate. It is true that occasionally a test may be made of butter that will be very near the correct figure, but it is also true that the results obtained by the Babcock test may be from one to three per cent off.

The best way to determine that fat in butter at the creamery is to make a moisture determination and a salt determination of the sample, add these two together, then to the sum add one per cent, which represents approximately the amount of curd in the butter, then subtract this sum from 100; the difference will be very nearly the fat content of the butter. The results obtained in this way will be far more nearly the correct figure than the results obtained by trying to test the butter with the Babcock test.—Hoard's Dairyman.

Factors Influencing Yield of Cheese

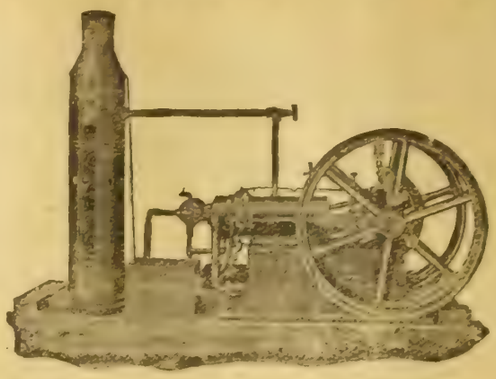
The yield of cheese is influenced by a number of things under the control of the cheese maker, such as the sweetness and flavor of the milk, but principally by the per cent. of fat and solids-not-fat in the milk.

If milk is slightly tainted the cheese-maker must handle it in a way during the cheese making process that will diminish the yield over the amount of cheese that could be obtained from the same milk if it was perfectly sweet and not tainted in any way.

The approximate yield of cheese can be calculated by multiplying the pounds of fat by 2.6 For example, if 100 lbs. of milk test 3.0 p. c. fat this will probably make 3.0x2.6 or 7.8 lbs. of cheese per 100 lbs. of milk, if it tests 3.5 p. c. fat, 3.5x 2.6 or 9.1 lbs cheese; if it tests 4.0 p. c. 4.0x2.6 or 10.4. By using this factor 2.6 you can calculate approximately the yield of cured cheese from milk of any test, provided the milk is perfectly sweet and in a satisfactory condition for making cheese.

Dysentery is a dangerous disease but can be cured. Chamberlain's Colic, Cholera and Diarrhoea Remedy has been successfully used in nine epidemics of dysentery. It has never been known to fail. It is equally valuable for children and adults, and when reduced with water and sweetened, it is pleasant to take. Sold by all dealers.

Farmers of Quality



Stationary and Mounted, in 1 1-2 to 30 Horse Power.

Want Quality!

Readers of THE MARITIME FARMER are of the quality stamp; we realize their discerning ability to pick an article of machinery that is correct in every mechanical detail. That is the reason why such care is taken to see that the **Ideal Gas and Gasoline Engines** are what we claim for them.

Every part of the "**Ideal**" is interchangeable—a mighty strong feature. The cylinder, instead of being cast with the base, is cast separate and bolts on the base. The valves, instead of seating directly on the cylinder head are enclosed in a valve cage, and the valve cage is inserted in the cylinder head, so that when the valves become worn, the valve cage and valve can be taken out and ground without removing the cylinder head.

The idea of casting the cylinder separate from the base is a good one, for when the walls of the cylinder become worn you don't have to buy a complete new engine, you only require a new cylinder that can be bolted on the base. Another good feature is an extremely long piston with double rings instead of using three rings. We use three sets of two rings each on the Ideal.

Another thing, there is a speed regulator on this engine which enables you to run the engine at any speed, and, of course, when you reduce the speed of the engine, you also reduce the fuel consumption. For instance, if a man had a 6 H. P. engine and wanted to run a cream separator with it, he could reduce the speed and thereby cut down his fuel consumption to suit the work.

All these are points to consider when looking for a gasoline engine of quality—one that stands without a peer.

"**Ideal**" **Gas and Gasoline Engines** are built on honor and built to give their operators satisfaction, and they do it. We do not build a cheap or low grade engine, but do cater to that class of buyers who wish a first class article at a reasonabl price.

Agents Wanted in Unrepresented Districts.

Write for Information

GOOLD, SHAPLEY & MUIR CO., Ltd., - Brantford, Ont.

Maritime Address--29 Dock St., ST. JOHN.

J. A. Pugsley & Co., St. John, N. B., Agents.

The

Prince Edward Island

Agricultural and Industrial

Exhibition.

Open to all Canada, at

CHARLOTTETOWN,

Sept. 19=23, 1910

$14,000.00 in Cash Prizes.

THREE DAYS' HORSE RACING,

on 20th, 21st and 22nd Sept.—Large Purses.

Magnificent attractions in front of the Grand Stand.

Cheap Rates on Steamers and Railways.

For Prize Lists, Race Programmes and all information write,

C. R. SMALLWOOD, Secretary-Treasurer,
Charlottetown, P. E. I.

Calf Scours.

There are many different remedies for calf scours. One which has been found very successful is the use of formalin. Dr. Klein, of the U. S. Bureau of Animal Industry, recommends it very strongly. The way to use it is to dilute half an ounce of formalin with fifteen and a half ounces of water. A dose consists of a teaspoonful of this solution to each pint of milk fed to the calf. Out of twelve calves that had scours treated in this way, eleven recovered without further treatment, seven of them recovering on the second day, three on the third and one on the ninth.

Heaviest Hay Crop in Thirteen Years

The Maritime Farmer :—

Please find enclosed my cheque for $3.00 to pay subscription to April 1912. If Not too late you may send me the Free Accident Policy for $1000.00. I have been so busy lately that I neglected sending before.

About done haying now. Crops the heaviest for 13 years. Land seeded from one to seven years averaged 2½ tons to the acre. Grain crop also very heavy.

Yours truly
J. W. DOUGLAS.

Caledonia, N. S.

Interview with Mr. E. B. Elderkin.

The following interview appeared in a recent issue of the Trinidad Mirror:

Mr. E. B. Elderkin of Amherst, N. S., Canada, and representing the Canadian Department of Agriculture has been staying at the Queen's Park Hotel for the past few days. No stranger to Trinidad, he paid the colony a flying visit some two years ago. Mr. Elderkin is anxious to see closer relations established between the Dominion and the West Indies.

Asked as to the object of his visit Mr. Elderkin said: I am here with a view to seeing what development is taking place here, commercially and agriculturally and more particularly as to stock.

With regard to stock your people cannot do better than to get their fresh blood from us.

But was there not some question about Canadian stock being not quite what it should be? Your commercial agent, Mr. Tripp, took up the cudgels in its behalf some time ago in his usual effective and convincing style, and as we have heard nothing about it lately it is to be supposed that he dealt with the objection satisfactorily.

To this Mr. Elderkin replied: I was not aware of the incident, but I can assure you that our stock is absolutely free from infectious disease. There may be a little tubercular, as there is everywhere you know, but there is less in Canada than there is anywhere, and our department, under Dr. J. B. Rutherford, is making every effort to encourage our people to bring about the better production of a higher class of animals of all kinds—cattle, sheep, swine and poultry.

Yes; some very fine animals have been received from time to time from Canada.

Yes, I know, said Mr. Elderkin, and our herds are as healthy as the herds anywhere. Why the British Government are recognizing that, because, just as I was leaving, I saw that the British Government is likely to withdraw its prohibition against Canadian animals, which hitherto have been slaughtered on arrival in a British port. They are going to withdraw that.

That will be good news for Canadian breeders and should encourage them.

Yes, we are aiming at that. Do you know, sir, you have a magnificent country in every respect, and so far as I have seen you have a fine lot of animals, but I cannot help thinking that a larger infusion of Canadian blood would help them. You see it is this way. A warm country is not exactly adapted to the production of the better class animals unless you have a good supply of fresh thick blood run into them constantly. They want vivifying with fresh blue blood. I gm glad to hear that your crops are exceptionally good this year.

Yes; they have been very good. Cane has been better than it has been for many years past. Cocoa has been splendid—if prices had only been a little better.

Yes; you have seen better prices for cocoa haven't you? Two years ago you were all cocoa and now you are all oil. I suppose there is plenty.

You have generally what we want

READ ABOUT THE GREAT INVENTION
THE ECCENTRIC SPROCKET WHEEL

Long spokes give greater tying-power. (See arrow A.)
Short spokes give swifter bundle discharge. (See arrow B.)
When you take hold of a heavy stone, exert all your strength and it refuses to budge, what do you call for? A long crowbar, of course. Why? Because greater power is obtainable with the long lever.
The great Invention—the Eccentric Sprocket Wheel (note arrow C)—is built on the principle of the lever. The long spokes (see arrow A and note how much longer than at arrow B) act as long levers—give greater leverage power.

It works out this way:
On our No. 3 Binder, when the bundle is about to be tied, the chain is pulled over the long spokes, which exert all their great leverage power—fully 16⅔ per cent. more than is obtainable with the ordinary wheel. The grain is compressed far more tightly.
You get a neater, more compact bundle and save considerable TWINE. Easier to pick up. Easier to carry, easier to shock.

Immediately after our Knotter ties the bundle, the chain is pulled over the short spokes (see arrow B and note difference in length of spoke as compared with arrow A). The shorter spokes greatly increase the speed of the chain. The bundle is given a swifter discharge than with ordinary wheel, and the needle is speedily brought back, out of the way of the downcoming grain, into position for the next sheaf.

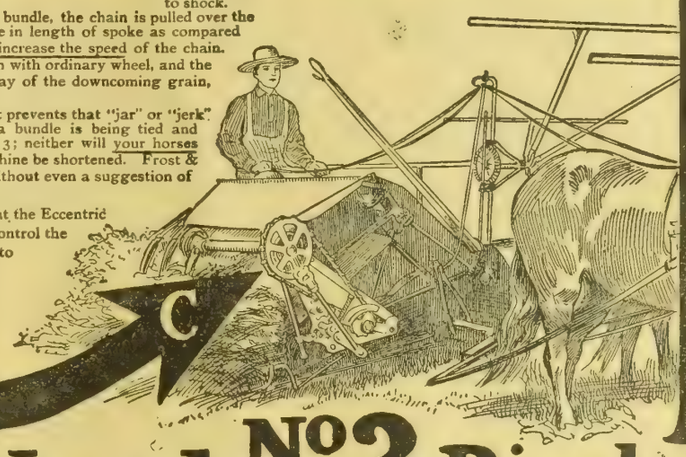
The Eccentric Sprocket does this, too—it prevents that "jar" or "jerk" always noticed on other machines when a bundle is being tied and discharged. You will not feel it on the No. 3; neither will your horses be annoyed by it, nor "the life" of the machine be shortened. Frost & Wood No. 3 runs along and does its work without even a suggestion of that "jerk."

Now, you see why every maker would put the Eccentric Sprocket Wheel on his binder if we did not control the patents for Canada. You see why it's wise to invest a post card and get our Binder Booklet so as to become thoroughly posted on the peer of them all—the Frost & Wood No. 3.

You are on the right track when you start investigating our No. 3—the binder that is built by a purely Canadian Company, who thoroughly understands Canadian conditions. We would like you to read a few of the hundreds of testimonials we have received from Canadian farmers, which back up our claims to the letter.

Just write us for catalogue

The Frost & Wood Company,
LIMITED,
Smith's Falls, Canada.



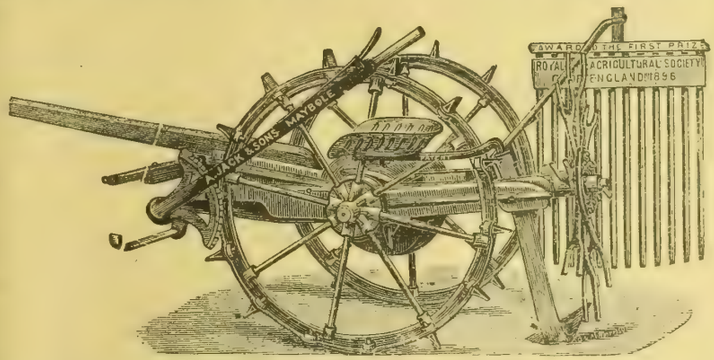
Frost & Wood No. 3 Binder

THE WORLD'S BEST POTATO DIGGER

Jack's Royal First Prize
New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position for Work.

THE NEW PATENT CADEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competiting.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, Canadian Agents, - - - Port Williams, N. S.

Acadia Seminary

School for Girls and Young Women."

A Standard

To prepare for **COMPLETE LIVING.** All courses are arranged with this end in view.

An Opinion

"What impressed the writer (in the Educational Review) was the admirable system that prevails in the management in every department of work; the kindly personality and tact; the genial sympathy in the relations between teacher and pupil and the interest which each one seemed to feel in the work of the day. **AN EDUCATION UNDER SUCH CONDITIONS IS A GREAT ASSET."**

Information

The new catalogue of Acadia Seminary has just been issued. It contains full information concerning **COLLEGIATE STUDIES, MUSIC, ORATORY, ART, HOUSEHOLD SCIENCE, BUSINESS,** etc., ete. There is provided just the course you need to fit you for **complete living.** The next term opens Septeuber 7, 1910.

Write to **PRINCIPAL H. T. DeWOLFE, Wolfville, Nova Scotia.**

Acadia College

1910—1911.

21 Professors and Instructors.

Department of Arts and Sciences

Bachelor of Arts Course.
Bachelor of Science Course.

Department of Theology

Bachelor of Theology Course.
English Course.

Department of Applied Science

Engineering Course.

Calendars and other information freely supplied on application to the Deans of the different departments.

Horton Collegiate Academy

Founded 1829.

A Residential School for Young Men.

The following courses are offered :—

Course Leading to Matriculation
General Course
Business Course

For further information apply to the Principal,

E. ROBINSON, B. A., Wolfville, N. S.

Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 15th, 1910.

Charlottetown Exhibition, September 19th to 23th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Full course at the Nova Scotia Agricultural College, Truro, N. S., begins November 1st, 1910.

Short courses at the Nova Scotia Agricultural College begins January 3rd, 1911.

Ladies Short Courses at the Nova Scotia Agricultural College, begins January 4th, 1911.

Don't Put Off

Seeing your friends and having them join in for a club of subscribers.

in Canada and we in Canada have what you want in Trinidad and I think we could trade with mutual advantage. You see Canada is not a self-contained country like that of our friends to the South of us; but Canada and the West Indies can produce everything that either of us wants, and I hope we shall enter into a closer relationship when we get our new fast steamers. I feel I have been rather unfortunate in this visit, because you see the head of your department, Professor Carmody, is away and your second man, Mr. Carruthers, is I am sorry to hear ill.

Are you going to stay any time?

I am going to Demerara on Wednesday and I shall retdrn on the same steamer. Then to Barbados and remain there for some days. Then Grenada and then up to St. Vincent, St. Kitts and Domibica. Then back to Barbados. Then I shall take the Royal Mail to Jamaica and home that way. I hope when we have better and faster steamers, that we shall become better acquainted and your people will come to see us and out people will come down oftener to see you. I can assure you that it would lead to our mutual advantage.

After a few more remarks of a similar nature the interview came to a termination.

The PUBLISHER'S DESK.

G. T. P. Dining Car Service.—The Dining Car service of the Grand Trunk Pacific is already commencing to attract very favorable comment. A few days ago a number of representatives of Marshall Field in Chicago, gave the following unsolicited testimonial:—"We have travelled extensively and in our judgment the service and cuisine are as perfect as any we have ever experienced." C. H. Ford, Field Manager, Chicago, Ill. H. L. Johnson, Sales Manager, New York City.

Absorbine Abroad.— The demand for the well known remedies Absorbine and Absorbine, Jr., in foreign countries has become so persistent that the manufacturer W. F. Young, P. D. F., of Springfield, Mass., has found it necessary to go abroad and get in closer touch with conditions there. Mr. Young left Montreal on July 9th, on the S. S. Laurentic for an extended tour of Great Britain and the Continent. At the present Absorbine can be procured in many of the largest centres and from chemists throughout Great arrange the distribution so that Britain, but Mr. Young expects to customers abroad can be supplied as handily and speedily as in the States. It is gratifying to note the great strides Absorbine is making as it is a remedy of exceptional merit and no claims are made for it hat are not fulfilled.

The many readers of this journal will notice scattered throughout its news and reading pages, notices appearing with each issue on five family remedies. These notices, we hope will not escape a good big share of the readers attention at all times for they lend a helping hand to the home and when once tried will always be used. These preparations have thousands of friends all over the Dominion to-day, and are fast becoming the most popular remedies in the market. In border and foreign countries where during the past 50 years they have been thoroughly tested and are now becoming so popular and so well established that Chamberlain's Remedies are more often termed "The tea and coffee of the drug trade". This last little phrase is quite sufficient to carry to each and every reader what may be expected what results follows a bottle of Chamberlain's Colic, Cholera and Diarrhoea Remedy, a bottle of Chamberlain's Cough Remedy, a bottle of Chamberlain's Liniment, a package of Chamberlain's Stomach and Liver Tablets or a pat of Chamberlain's Salve. Ask your dealer or druggist about these preparations and if you try a package of any of these lines and after using some you are not perfectly satisfied return it immediately to your dealer and get your money back. Each article being guaranteed.

FARMERS OF THE EAST

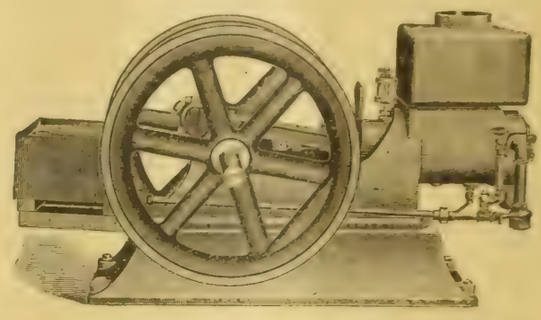
should take out an agency for the easiest selling Gasoline Engine on the market to-day. We refer to the

"WATERLOO BOY"

FROST PROOF STATIONARY ENGINE

The most complete and up-to-date Gasoline Engine on the market to-day.

Write at once for full particulars. We will give you every assistance in making a sale. Don't delay, the territory you want might be taken if you wait until to-morrow.



I am a "Waterloo Boy" but can do the work of several horses.

J. D. FRIER, - Sussex, N. B.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure—**you,** my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience,** we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharge, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also **pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weakness peculiar to our sex.**

I want to send you a **complete 10 days treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all women's diseases and makes women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H 309 - WINDSOR, ONT.

Railroads and Their Relations to the Public.—The man who knocks on the railroads belongs to the Lobsteria. As the railroads prosper we all prosper. When the shops shut down, orders for iron are cancelled, and the empties line the sidings, we are all up against it, and the bread-line forms. Always in times of stress a vast number of people look to the Government for relief. But what shall we say of a Government which makes war on those who are now giving work to millions, and thereby assure us peace and prosperity! If the men in charge of our Government insist on being Business-Baiters, the horse roar of the mob, demanding work or bread, will again be heard, and women and children will be pushed defenseless into the storm. Business in this country gives work and wages to everyone who wants to work. Let business alone. Ex-party actions against the railroads should be forbidden by the Statute. Burglary, hold-ups, strong-arm tricks, rape, are all ex-parte proceedings. And what think you of the dignity of a President who resorts to an ex-parte action in order to gain a cheap and transient legal victory over a very important part of the people whom he has sworn to protect in their legal rights. The railroads have only one thing to sell, and that is transportation and the people of this country are willing and anxious to pay for the transportation all it is worth. We are not mendicants, and we ask for nothing at less than its value. He who tries to incite class-hatred and makes it appear that there is war on between the railroads and the people, is a wicked-sham. The railroads thrive only as the people thrive, and every railroad manager knows it.—ELBERT HUBBARD.

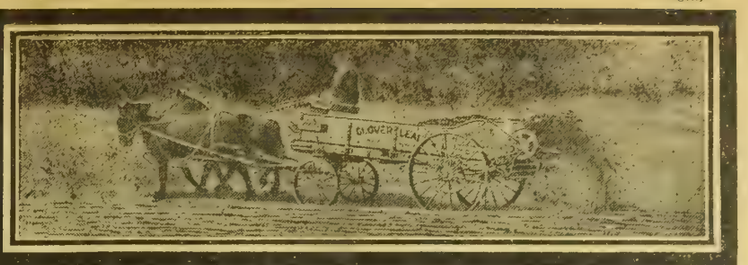
Fredericton Business College in New Quarters Sept. 1st.—As a result of the extensive improvements being made to the Inches building at the corner of York and Queen Streets, the Fredericton Business College at present located in the Pitts Block on York Street, will have quarters second to none in the Maritime Provinces, and surpassed by none in Canada. The new quarters of the Business College will be on the third floor of the Inches Block. The situation itself could hardly be bettered, the windows giving an excellent view of Queen Street, Phoenix Square, the grounds of the Provincial Normal School and the river. The new quarters are to be occupied by September 1st. The third floor of the Inches building is being entirely remodelled. When the alterations are completed there will be several large and commodious class rooms, divided from one another by glass partitions. There will also be a separate office for the principal, Mr. W. Osborne, located at the right on the main stairway. The toilet rooms will be in the extension of the Inches block which faces York Street. Another storey is being added to this part of the building, and doors cut through the rear walls of the latter to make the necessary connection between the two. Hardwood floors are to be laid throughout all that part of the building which is to be occupied by the Business College. Steel ceilings are also to be used. The walls of the College premises will be finished burlap. Particular attention has been devoted to the heating and ventilation of the new premises, both being particularly important in connection with schools or similar establishments. The ventilation of the new premises will be by two chimneys which are to be used no longer as chimneys. Summer and winter ventilators are to be installed. The Business College will have its own heating apparatus. A combined hot water and hot-air system is to be used and it is calculated to keep the temperature comfortable at all times. Electric lights are to be installed throughout the rooms. In the past the Fredericton Business College has achieved a position in the forefront of the business-teaching institutions of Canada. It will no doubt continue to advance under the direction of its present energetic principal and with the further advantage of being located in magnificent quarters. The school on account of being situated in the educational centre of the Province of New Brunswick has an advantage possessed by none other.

Maritime Live Stock for Wyoming.

Mr. Jas. McLay, of the Wyoming Agricultural College staff, left Sussex, on the 26th, with a carload of purebred dairy cattle. Mr. McLay is no stranger to a great many of our readers. When opportunity offered he was not a bit loath to recommend to the college authorities the advisibility of procuring new blood along dairy lines from Maritime Province herds.

The shipment consisted of Jerseys, Ayrshires, Canadians and Holsteins bought from the following herds: Logan Bros., Amherst Point, N. S., five Holstein heifers; Samuel Dickie, Onslow, N. S., one Holstein heifer; and one Holstein bull; Retson Bros., Truro, N. S., one Ayrshire cow and calf; C. P. Blanchard, Truro, N. S., one Ayrshire cow; Nova Scotia Agricultural College, one Ayrshire bull; J. Frank Roach, Sussex, one Ayrshire heifer calf; Walter McMonagle & Sons, Sussex, one Jersey heifer, and one Jersey bull; Robert Robinson, Sussex, one Jersey heifer; Sir Wm. Van Horne, St. Andrews, N. B., four Canadian heifers and one Canadian bull.

The stock was selected by Mr. McLay in company with Prof. Faville, chief of the live stock division at the Wyoming Agricultural College. The lot included some splendid animals that have a line of producing ancestry behind them that should show good results in the individual animals and their progeny, provided they get the proper care that is so essential to the development of the best traits as profitable producers.



Investigate The Record of The Spreader You Buy

BEFORE you buy a manure spreader, find out what it has done for other farmers. That is the best proof of what it will do for you. Investigate carefully, and you will find that in the matter of service rendered, there are two machines that rank high above all others. These are the—

I H C Spreaders

Cloverleaf **Corn King**

They have proved their value in actual use in the hands of hundreds of satisfied farmers. Choose one of these machines, and you will be sure of getting the full value of your manure by spreading it in the most economical and efficient way.

Here are a few "reasons why:"

The mechanism which transmits the power from the axle to operate the apron and beater on I H C spreaders is simple and efficient. It requires little power to operate—does not get out of order.

The beater is strong and positive in its action. It thoroughly pulverizes the manure and distributes it evenly. It can be quickly regulated to spread manure as thickly or as thinly as desired This adjustment can be made from the driver's seat while the spreader is in operation.

The wood in I H C spreader frames is hard, resinous, non-porous, very regular and narrow ringed. It is air-dried so that the sap is retained—cementing the wood fibres together. This prevents manure liquids from penetrating it and makes it proof against the action of the acids in the manure.

Wide-tired wheels and roller-bearings insure light draft, making I H C spreaders easy on the horses.

The Cloverleaf spreader has an endless apron. The Corn King spreader is of the return apron type. Either can be furnished on special order with lime hood for spreading commercial fertilizers, and drilling attachment for distributing manure in rows. Both styles are made in several sizes, so, when you choose from the I H C line, you are sure of getting just the machine that will meet your needs.

Call on the I H C local dealer and go over the matter with him, or, if you prefer, write nearest branch house for catalogue and full information.

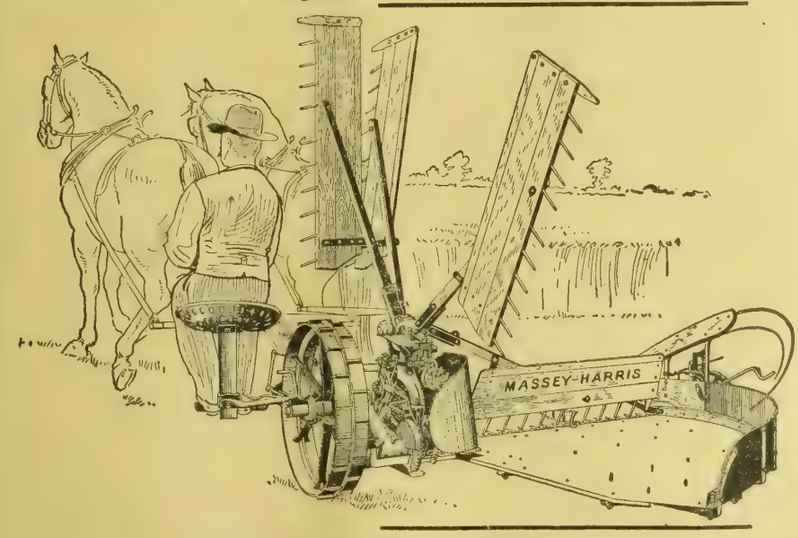
CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
Chicago **U S A**

THE I-H-C LINE

LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY.

Massey-Harris Reaper.



The only Reaper with a steel platform. The large drive wheel gives ample traction. Gears are well protected by shields. Will cut clean without digging into the ground. Pitman has steel strap at knife end and brass bushing at crank end. Driver has perfect control of the Rakes. Platform is easily raised and lowered. Main wheel runs on Roller Bearings. Table is easily tilted by a convenient lever. Machine can be folded for transport easily and quickly.

THE MASSEY HARRIS CO., Limited, - Moncton, N. B.

MARKETS.

Charlottetown Prices.

GRAIN.—Oats 40c to 42c.

FEED STUFFS AT RETAIL.—Bran, $1.25 to $1.30; shorts, $1.35 to $1.40; middlings, $1.40 to $1.50; oil-cake, $2.25 to $2.50; corn meal, $1.85; to $1.90.

LIVE STOCK.—Butcher's cattle, 5c to 5½c liveweight; milch cows, $30 to $45; sheep, 3½c to 4½c liveweight; lambs, 5c to 6c lb. liveweight

DRESSED MEATS.—Beef (carcass), 10c to 12c; mutton, carcas, 8c to 9c; veal, carcas, 4½c to 6c; lamb, carcas, 11c to 12c, pork carcas, 10c to 11c.

HORSES.—Drafters, $150 to $300; roadsters, $150 to $225; carriage $140 to $200.

DAIRY PRODUCTS.—Creamery butter prints 22c to 22½c, creamery butter, solid, 21½c to 22c; dairy butter, 17c to 18c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 15½c to 16c; fowl, 10c to 12c; chickens, 50c to 65c a pair.

FRUIT.—Cherries, 10c to 12c quart; raspberries 9c to 12c quart; currants, 8c to 12c quart.

VEGETABLES.—Carrots, 5c per bunch; potatoes, old, 60c per bushel, new, $1.25 to $1.50 per bushel; turnips, 40c to 60c per bushel; beets, 5c per bunch.

MISCELLANEOUS.—Hay, $9.00 to $9.50 straw, $5.50 to $6.00; wool, 23c cash; beef hides, 8c to 8½c calf skins, 10c to 12c; sheep skins; 25c to 30c; lamb skins, 25c to 30.

There is not much change in markets since our last report.

Oats took a sharp advance but are today a little easier again and our quotations are about what shippers would be willing to pay. Potatoes are scarce and the old stock is about cleared up and any small lots offering are eagerly sought after by the retail trade at about 60c to 65c. The new stock is just beginning to come on the market and they are selling at good prices, the quality is reported good. Small fruits are not plentiful yet but the next week or two should bring out large quantities but the crop is reported light Strawberries are over and the crop was not up to the average.

Butter holds about steady with supply sufficient for requirements. Eggs are higher and will continue to advance, but they show considerable shrink at present, poultry is scarce and quotations are purely nominal. Feed stuffs of all kinds are higher and will continue so for balance of season with further advances anticipated. There has been no meeting of the cheese board since our last report and consequently no new business, but it is generally supposed that rather too high a price was paid for cheese at last board meeting, and unless markets are stronger next meeting we do not think that the same price will be obtainable. The hay is pretty well all stored and in good order, the crop is a record one.

St. John Prices.

GRAIN—Oats, 55c.

LIVE STOCK—Milch cows $35.00 to $50.00.

DRESSED MEATS.—Beef (carcass) 6c to 10c; (retail) 10c to 22c; mutton, 5c to 8c; veal, 7c to 10c; lamb, 11c to 13; pork, 10½c to 11½c.

DAIRY PRODUCTS.—Creamery butter, 24c to 25c; dairy butter, 20c to 22c; cheese 12c to 12½.

POULTRY AND POULTRY PRODUCTS.—Eggs, 19c to 20c; fowl, 60c to $1.20; chickens, 50c to $1.10; ducks, 70c to $1.25; turkey, 14c to 20c.

VEGETABLES.—Carrots, 5c per bunch; potatoes, 80c per bush; beets, 5c per bunch.

MISCELLANEOUS—Beef hides, 9c; calf skins, 15c; sheep skins, 20c to 30c; lamb skins, 35c to 45c.

Antigonish Dairy Prices.

At the present time we are getting an excellent flow of milk and the prices for cheese are from 10¾c to 12c, with prospects of an early advance.

The local market for butter is 18c, I might say we have an excellent lot of hay but the farmers are having a hard time securing it as it is raining some nearly every day.

I am enclosing a head of timothy grown here which I think would want a lot of beating. This head measures 11½ inches, but there were many 8, 9 and 10 inches long in an acre field. How does this compare with New Brunswick.

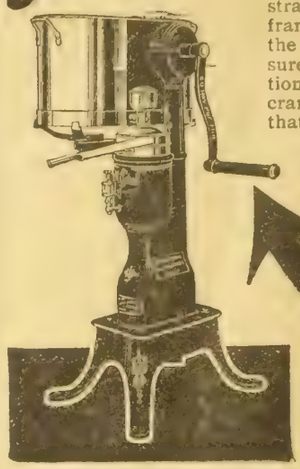
FOUR cows and an I H C Cream Harvester will pay bigger yearly dividends than five cows and no separator.

The more cows you own, the more you need an I H C Cream Harvester. The big profits in dairying come from cream—not milk. An I H C gets all the cream—quality cream—while the fresh, warm skim-milk is a money-saver when fed to calves.

A cream separator is a necessity on the modern farm. It is simply a question of Which One to buy. Thousands of progressive farmers and dairymen, after the closest investigation of all styles, have chosen

I H C Cream Harvesters

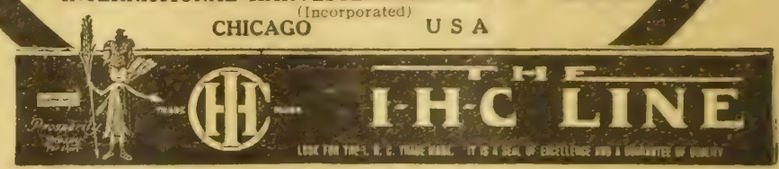
There must be some very good reasons. If you will look into the matter as closely as I H C owners have, you will find that I H C Cream Harvesters are the only ones with dust-proof and milk-proof gearings. You will find in them the most perfect straining device—insuring pure cream and skim-milk always. You will see that the frame of an I H C is entirely protected from wear by bronze bushings at all points; that the I H C has largest shafts, bushings, and bearings; that it has the safest, simplest, surest, and most economical oiling system; that the flexible top-bearing prevents vibration and keeps the bowl steady, no matter how unevenly the power is applied. The crank is at just the right height for convenient turning and the supply can is so low that it does not require tiresome lifting.

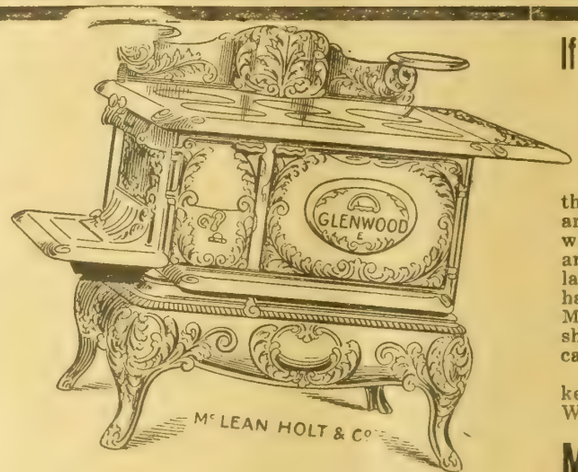


There are four sizes to choose from—350 lbs. to 850 lbs. capacity and two styles—the Bluebell, gear drive, and the Dairymaid, chain drive. Call on the I H C local dealer for complete information and catalogues, or write nearest branch house for the information you desire.

CANADIAN BRANCHES:—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
CHICAGO U S A





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Why go out of the Maritime Provinces to buy any thing that is made here? You can get just as good articles here and spend your own money at home that will come back to you. Our GLENWOOD RANGES are equal to any stove made in Canada to-day and our large sales go to prove what we claim is right. We have Ranges in all styles and prices to suit every one. Made in St John. Fitted for coal or wood, with tea shelf, high shelf, hot closet, reservoir, etc. Send for catalogue and prices.

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McLean-Holt & Co., 155 Union St., St. John, N. B.

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This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. McLEAN & SONS, Hopewell, N. S.

SHORTHORN BULLS for sale, WALTER EATON, Upper Canard, Kings, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

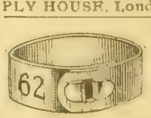
SHORTHORN BULL, 21 months old for sale at a bargain. Write me for price or better come and see him. HAROLD ETTER, Westmorland Point, N. B.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

DAIRY AND STOCK FARM FOR SALE.—Three miles from Sussex, 300 acres, 200 acres under cultivation, large intervale, cuts 80 tons hay. Good two-story house heated by furnace water pumped by windmill, good barn.—HARVEY B PARLEE, Sussex, N. B.

THREAD POWER FOR SALE.—One second hand two-horse Moody thread power for sale cheap. First set of planks still on the machine. Write POWER care of MARITIME FARMER Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.



Perfection Ideal Band

It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

Potash and Clover.

In agricultural experiments the relative fertilizing value of different fertilizers does not always stand out clearly, as the results obtained may be rendered indistinct by the character of the soil and the season's weather; but the benefit of potash and phosphate for a clover crop is a fact that has been demonstrated over and over again irrespective of soils and seasons, and an abundant clover crop is an advantage which is felt through the rotation—"were all the merits of red clover emblazoned in letters of gold on a large canvas it would fail to convey to the mind its true value."

That potash is predominant requirement of the clover plant is shown by the fact that a crop of 4 tons of clover hay contains 180 lbs. of potash, and not more than 62 lbs. of phosphoric acid.

Horse Manure and Flies.

"Lime is the best thing to prevent flies from breeding in horse manure, but it is the worst thing for the manure. It will drive off the ammonia, better haul the manure every day and spread and plow it under, or make a fly-tight shed with fine wire screens at windows and door. Wheel the manure into this shed as fast as made and keep the door shut tight. This will keep the flies away from it. Chloride of lime is also used on the manure. There can be no doubt that flies breed in horse stables. In one case 1,200 flies in different stages were traced to one pound of manure. The total round of life of one fly is about 10 days, and the individual average about 120 eggs. This shows how fast they increase, and horse manure is their favorite breeding place."

In buying a cough medicine, don't be afraid to get Chamberlain's Cough Remedy. There is no danger from it, and relief is sure to follow. Especially recommended for coughs, colds and whooping cough. Sold by all dealers.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., August 23, 1910. Number 21.

The Improvement of Country Roads

By A. W. Campbell, Deputy Minister of Railways, Ottawa.

MR. CAMPBELL is one of the World's best known authorities on good roads and their making. The following article appears in The Thirty-first Annual Report of The Ontario Agricultural Experimental Union.

I am sure it is quite unnecessary for me to emphasize the importance of better roads to this Experimental Union. It might be important, however, for me to refer to the fact that so far as roadmaking is concerned, to my mind, it has been a series of experiments in this country, extending over nearly one century, and I have reached the conclusion that the time has about arrived in the history of our Province when we should cease experimenting in this particular, and that we should try to have some reasonable standard of roadmaking for each county and township in the proince.

It is a well known fact that there are a few principles underlying the construction of roads, which, if we are to make a success of our expend iture of money and labor must be closely observed. You all understand the absolute importance and necessity of observing the principles underlying the construction of roads which, if we are to make a success of our exp enditure of money and labor, must be closely observed. You all understand the absolute importance and necessity of observing the principles in connection with the work in which you are especially interested, and in the building of a road as well as in the construction of any other public work, there are principles of construction which must be observed if success is to be achieved, and it is useless and hopeless for us to go on as we are still doing in many of the municipalities of Ontario. You are aware that notwithstanding the fact that in the last few years about one-half of the munivipalities of the townships of the Province have commuted or abolished the system of statute labor, yet in a great majority of townships that system still prevails. And if those who have charge of this labor were in a position to concentrate that so as to produce its value in actual work, not in the exhaustion of time and effort, what an enormous work could be performed with the labor that is taxed against land in this respect.

Mr. A. W. Campbell.

Statistics collected by our department show that there is a little over a million days of statute labor still performed on the roads of Ontario. When that million days of labor is not concentrated but scattered as it is, although these men do work faithfully, nothing but temporary work, patching and repairing can be expected. In addition to that, we have cash annually raised by direct taxation, making in all about $2,100,000 or its equivalent, spent upon the roads of Ontario annually. The clerks' returns reported at our department show that in the last ten years there has been spent nearly $21,000,000, or its equivalent, in labor on the roads.

Now, I have frequently stated that if this labor and money were given to me and I were placed in a position to concentrate it and utilize it as I saw best under fixedplans and specifications, I would undertake to macadamize in a first-class manner every rod of road in Ontario upon which the expenditure has been made in the period of ten years. If it should not be accomplished, then why should we not ask the reason why more has not been made of this money and labor.

The work has been carried out in an indefinite, shiftless sort of way. Pastmasters and road commissioners are being changed every year, and they do not get a sufficient opportunity to learn even a little of something about the principles of roadmaking before they are set aside and others placed in their position.

If we had some trained pathmasters or trained road commissioners and they were placed in charge of the work, and their positions were made secure, so that they could make plans of the roads of the townships and state what improvement is required on each of these roads, an improvement that would be in keeping with the requirement of the traffic, and that they could commence at a certain point and utilize the labor and the money as far as it would go each year in doing some fixed and definite work and extend that from year to year, in a very short time we would have a long mileage of first-class roads in each township.

Under the county road system in the county of Prince Edward, in the last two years, they assumed about one hundred miles of leading road in that county. That county now concentrates the expenditure that used to be placed upon one hundred miles of road, and they commenced at a certain point last year. They first equipped themselves with a complete outfit of road-making machinery. Without first-class implements you cannot do first-class work. They purchased regular crushers and steam rollers, and last year they macadamized twenty-two miles and this year a little over twenty miles, making a stretch of forty-two miles of the road in two years' time. Fancy what that county will accomplish in the next ten years! Fancy what they would have to-day to show for their expenditure if they had commenced ten years ago!

I do not believe it is a question that is going to disturb the people as to how the money is going to be raised. We are raising an enormous amount of money now, but the unfortunate part of it is the way the money is being handled. We want to work economies in connection with our municipal taxation, and here is where the members of this Experimental Union with your special training along these lines and with your ideas of how carefully and cautiously matters in general should be studied in order to produce the best results for your labor and expenditure, can help. There is no question of so much importance to the people to-day as that of the improvement of the roads, and there is no question in which you can afford to devote some of your special time and some of your training to better advantage than to the laying down of capable and competent plans for the improvement of our roads.

Reading an account of what you are doing here, while coming along in the train this morning, I noticed that you have been carefully studying the wisdom of under draining in connection with your farming operations. As an engineer of a good many years' experience in matters of drainage, I can only say that this is an exceedingly important matter in connection with your farm operations. It is, as I think, the basis of all farming operations. Unless land is thoroughly and carefully and perfectly drained so that the pores of the soil may be thoroughly and fully opened to receive the benefits that result from the falling of the rain and from the nourishment of the melting snow, it is useless for you to attempt to farm successfully that particular land. Tile draining and its importance in connection with farming cannot be over estimated. Tile draining of the foundation of the ordinary road is the first principle that must be observed in road-making, and unless we do see that the foundation is thoroughly and properly drained, it is as useless and as futile for us to attempt to build a road as it would be to attempt to put up a first-class building on a wet and yielding foundation.

In fact the principle of road-making is simply boiled down to the question of drainage. It is the soil after all that carries the load. The natural soil, the clay and the sand which forms the foundation for that road has to carry the load and that should be drained. Where the sand is porous or wet or boggy, it may be necessary to resort to tile draining. Place a drain underneath the roadway where there are holes or boggy places, sandy or moist spots, so as to remove all the moisture and create a hard foundation. It matters not what you put on the surface, whether it be gravel, broken stone, vitrified brick, or asphalt, if the foundation is moist, the frost enters that foundation, acts upon that moisture and when the frost disappears in the spring the foundation is left loose and unsuitable, and the crust that has been created on the surface is simply a crust resting on a yielding bottom that will crack, break, and rut under very slight traffic.

The foundation is the first thing to be obtained. The placing of the surface material, the gravel and the stone is the last subject to be con-

sidered. The great majority of our roads for years to come will necessarily have to be earth roads, and in many instances where these roads are properly drained and cared for, they are as useful and as serviceable for the little trgffic that passes over them as an asphalt pavement; but in a city where the traffic is extremely heavy, such a road would not do. We should classify these roads according to their importance We have what we call leading roads, the main arteries leading to the city. We have other roads that serve only neighborhoods and are used only by occasional teams. Then there are the division lines and back concession roads that are used by only one or two farmers, and not at just the season of the year when roads will be injured by travel. If these roads are properly drained and crowned, and attention is given to their maintenance, they will be quite serviceable roads, and can be made what would be considered ideal roads for ordinary traffic.

When we reach the next class of roads where the traffic is a little greater and where the roads are used during all seasons of the year, then it is necessary to resort to a covering of some material that will resist the wear, and that will shed the water and make a hard, smooth, wearing surface. That is why the gravel or broken stone is placed on the road. Ordinary land gravel is composed of 50 per cent. of sand, which is useless in road construction and should be eliminated. The best practice suggests that all gravel should be placed through crushers where the larger stones are broken and where the smaller stones are reduced to cubical pieces so that they will bind together and where the sand is abstracted and nothing but clean stone is retained for the road bed. Gravel of this kind is almost equal to crushed stone. Where gravel is not plentiful, we believe then is using crushed stone of the best quality that can be obtained within reasonable distances of the work. It is not practicable for us to always be able to select ideal road-making material for country roads. Trap rock is supposed to be the best. It has a hardness and toughness that will resist wear and last a great many years, but trap rock is only to be found in certain sections of the province, and the cost of forwarding it and distributing it through the country would make the price impracticable. We have to use the best material available. There are many localities unfortunately situated in the province, which have neither stone or gravel for use on the roads and which are under the necessity of importing crushed stone by rail. The cost of such roads is not expensive in the vicinity of towns and railway stations and in view of the greater durability of crushed stone, it is frequently desirable to use that material, particularly when it can be shipped in by rail close to the stations even where gravel may be obtained. The greater strength of crushed stone and the greater durability will in the end repay abundantly the additional cost.

In connection with gravel roads or broken stone roads, I wish to say that it is useless for us to go on hauling and dumping gravel, spending our time and money in putting on roads gravel that is not suitable for the requirements. The man who is charged with the making of the roads in a township should have some scientific knowledge of these things, so that he can pass upon the quality of the material and say how it should be best treated so as to make it more suitable for the best work in hand. Prepare the material which you have on hand in the most competent way to make the most of it. This is where the experimenter can inform himself to the best advantage and the fact of his constantly being in touch with the work will, in a very short time, make him a most valuable official to any county or township. Everytownship should have in its employ one man of this description who will plan in a general way the work of road-making, and who will say what drainage should be provided and who has sufficient scientific knowledge to handle an ordinary drainage level and who can take levels, plant the stakes, map out the work and see proper tools are provided and that the fall for the water is down hill and not to make the ditch first to find out whether the water will run to the north or south.

Take the proper levels and see that you have the proper directions before you commence the work of construction and then arrange to have the outlets made so as to dispose of the water in the smallest quantities, never leading it a long distance along the side of the road that will fill in and obstruct its flow, injure the fall, and ruin the road.

Drainage is of the greatest importance, and if I should only attempt to emphasize this one question to-day, I would leave you to consider the question of how broken stone should be prepared and how it should be applied. I would emphasize drainage as being what I believe to be an exceedingly important matter in connection with road-making. We can make ordinary clay roads for proper drainage, and proper grading and shaping and attention.

First-class serviceable roads for the ordinary requirements for certain districts throughout the province can be made in this way, and only the more important roads really demand the application of gravel and broken stone. The first thing in this road problem is to get the council to look upon it as an important matter, and after they have decided on their plans, they should place the work in the hands of a man who has sufficient scientific knowledge and training to undertake the work and see to it that whatever expenditure is made each year, whether of labor or money, that it should be directed along lines of of these particular plans and that every year's work, every day of labor, and every dollar of money should be made to show its value in permanent results. The plans which we follow generally in designing of the township is to classify the roads under three heads: 1. The leading roads, upon which most of the traffic passes; 2. The neighborhood roads leading on to these and subject to the traffic of the particular neighborhoods;and 3. The concession lines. The most important road should be graded to the width of twenty-four feet, the second class twenty feet, and the third class eighteen feet.

Experiments have taught us that these are about the praper widths to be used in connection with township work. After the foundation has been drained carefully, the road should be crowned so as to shed the water from the centre into the ditches. That crown should be one inch to the foot from the centre to the edge of the ditch. That is where the road is twenty-four feet wide. The fall from the centre to the edge of the ditch should be twelve inches.

After the road has been graded, it is advisable to pass a heavy roller over it so as to compact it thoroughly before the traffic is allowed to go on. If the traffic is allowed to go on the loose earth, the first team will rut it and after the traffic is pretty well directed into that rut. Water is held there and the injury commences. It is an excellent practice to roll with a twelve to fifteen ton steam roller. Horse rollers weighing from six to eight tons are being used with a great deal of success. A steam roller should be in possession of every township municipality where road-making is being done.

You cannot do this work properly without proper implements. If township councils would defer their money to the purchase of a complete outfit of machinery for the first year, they would be further ahead than by going on in the usual way without implements to do the work properly. Do not make the great mistake that many councils have made in flying away at once to purchase machinery without making provision for its operation and maintenance, and without studying who is to look after it. In many instances these machines are placed in the hands of inexperienced men. A standard should be established that could be followed to advantage and the the money that is being appropriated will be appropriated to useful purposes.

In conclusion, let me urge that in our modern road-making of to-day we seek to find and employ experienced men in this work; that we use modern road-making machinery; that we select our material with care, that we drain thoroughly, that we grade in a workmanlike and permanent way, and that throughout all we seek economy in efficient management of men and teams in this work.

Community Co-Operation in Live Stock Breeding.

A subscriber who was interested in remarks published in a recent issue of the Maritime Farmer re Community Co-operation in Live Stock Breeding, sent the following article for publication:

"A careful investigation of the advertising columns of our agricultural papers will impress one with the widely separated homes of the individuals belonging to our various breeds of live stock. If we undertake to purchase a herd of Red Polls or dairy Shorthorns, we find the individual herds of these breeds scattered to the four corners of the earth. In other words, we are unable to locate a Red Poll or dairy Shorthorn centre or community, but we find it necessary to travel many miles in order to inspect the animal offered for sale. What is true of these two breeds is true to a greater or less extent of all breeds of live stock. There is a tendency for a farmer starting with purebred live stock to get a different breed from his neighbor, instead of getting the same breed and co-operating with his neighbor in advancing the interests of that breed in their community. There seems to be a lack of unity and steadfastness of purpose, if not a lack of enterprise in the breeding, feeding and marketing of our live stock.

"At the present time considerable interest is manifested in getting a neighborhood interested in some one breed of horses, cattle, sheep or hogs. A study of the development of our improved breeds of live stock shows that much has resulted from the breeders in a given community working together. For instance, in England we find many of our leading breeds of live stock developed in local communities. The early development of the Shorthorns took place in the Valley Tees, and the Herefords in the County of Hereford. On the islands of Guernsey and Jersey, laws were passed prohibiting the use of any other stock for breeding purposes except the breed belonging to that island. In France, we find the Percheron horse highly developed in La Perche, and the farmers and breeders of small means co-operating in order to advance the interests of their favorite breed.

"There are many advantages resulting from this co-operation. In the first place, it stimulates the breeders to produce animals of better quality. These stand out as object lessons to the neighboring farmers, thus in time increasing the demand for improved stock in that community. As soon as a community gets interested in one breed of cattle, they become interested in building up a reputation for their county and locality. This co-operation enables the small breeder to get a start, and to find a ready market for his surplus males. Where farmers will agree to co-operate, it is not necessary to keep a bull for instance on every farm, unless the herd is large enough to justify the expense of feed, labor and risk involved. By several farmers clubbing together, putting their money into one superior animal, they will be able to greatly improve the stock of that community without materially increasing the expense. Some farmer centrally located can be designated as the proper person to keep the bull, and to receive a fixed sum for him for his feed and care. A charge (say 50 cents or a dollar for those financially interested in the bull) should be made for each animal bred, to cover this expense. After this bull has been kept two or three years, and has proven a superior breeder, he can be sold to, or exchanged for one from a similar group of breeders, and in this way a valuable animal may be retained in the neighborhood. Where several large breeders or groups of breeders are located near together, it is possible for them to appoint a committee to visit several stock farms and select all the bulls necessary for their community of the same general type and character. These can be exchanged among the individuals or groups of individuals as often as occasion demands.

"Take, for instance, a community where Shorthorn cattle predominate. Why should not those interested in Shorthorns, including all who intend to use purebred Shorthorn sires, gather together, form an association with the determination to drive the scrub bull from the community. In other words, they would bend all their energies in making their community a Shorthorn centre, which would attract buyers of Shorthorn cattle because it would give them a chance to select from a large number or to purchase in carload lots. If a buyer goes to a breeder in the community and does not find what he wants, he is referred to a neighbor; or if he wants several animals, he is referred from one breeder to another until he gets what he wants. Usually a buyer is willing to pay more money for animals when he can buy them near together than when he has to pick them up one by one from a large area.

"Not infrequently it is desirable to develop some special quality as constitution or prolificacy in a

breed of animals which requires careful selection from a large number of individuals. This is made possible when a community is devoting its energies to one breed. When a good animal has demonstrated his superiority in stamping upon nis offspring those qualities which are desirable to perpetuate, he can be retained in the community during the period of his usefulness, and selection can be made from a large number of his own get which possess the special qualities desired.

"An example of the value of the community working along one line is well illustrated at Lake Mills, Wisconsin, where the farmers and breeders are devoting their energies to Holstein-Friesian cattle. Over $100,000 worth of grade Holsteins are shipped out of Lake Mills annually. Counting the value of the purebred produced, the total income for stock in that community amounts in round numbers to $200,000 per year. When a scrub cow sells from $35 to $45 the grade is selling from $60 to $80. Twelve-months-old heifers are selling as high as $30 apiece. During a single year from forty to fifty carloads of grade Holstein cattle left this community for Mexico. One buyer is reported to have purchased during the last few years as high as 800 head.

"In a similar manner Guernseys are being pushed at Wausau, Wis., where recently a carload of grade Guernseys sold for $75 per head and another carload for $72 per head.

"An illustration of the power of co-operation in another line is shown in the Wisconsin Experiment Association, an organization formed by the Short Course graduates of the College of Agriculture. The members of this association unite in their efforts to raise and distribute purebred seeds. They have succeeded in spreading over the state a variety of corn that has far exceeded the corn previously grown in Wisconsin. In like manner they have disseminated good varieties of barley, oats, and other feed crops. The organization now numbers 1200, and is a great power in the state. A young man joining this organization is furnished a small quantity of improved seed. As soon as he produces more than he wants for his own use, he has an opportunity to sell through the association, at good prices, for seed purposes. The influence of this association is felt upon the neighboring farms, as these young men furnish object lessons for the entire community. When a farmer sees a field of barley or oats that is doing exceedingly well upon the farm of these young men, he begins to inquire where the seed came from, and how he can get seed of that quality.

"This same power and influence may be exerted with those who handle live stock. If our stockmen will only unite and maintain a steadfastness of purpose, there is no telling what great results may be accomplished. One man may not amount to much by himself, but when twenty, thirty or a hundred men get together for a definite purpose, there is no measuring of their power and influence in a community.

"Those interested in the subject matter of this paper may desire to have an outline of a constitution and by-laws wnich may serve as a basis for an organization of this kind. The constitution and by-laws submitted herewith is a modification of one worked out by the Animal Husbandry Department of the University of Wisconsin after a study of the workings of various breeders' associations in the state. It is offered merely as suggestive and should be modified to meet the needs of the individual associations. The constitution and by-laws should be made as simple as possible.

CONSTITUTION.

We, the undersigned, farmers of ———— County, do join together for the purpose of advancing the live stock interests of our county (or community).

Article II.—Object. The object of shall be known as the ———— Breeders' Association (or Farmers' Club, if it is desirable to enlarge the scope of the work to include improved seeds and forage crops or other interests.)

Article 11.—Object. The object of this Association shall be to promote the breeding and improvement of high grade and purebred live stock in ———— County (or counties), and to aid its members in buying, using and selling first-class animals.

Article III.—Membership. Any farmer in the neighborhood, with his wife, sons and daughters, or hired man, interested in the object of the Association, may become a member upon the payment of the prescribed annual dues.

Article IV.—Officers. The officers shall consist of a President, Vice-President, Secretary and Treasurer, elected by ballot, and to hold office for one year.

There shall be an Executive Committee of three members, appointed by the President, who shall have charge of the affairs of the club, plan its meetings, arrange its programs, provide speakers, and transact any business that may be desired by the club.

BY-LAWS.

Section 1.—Meetings. The club will hold its meetings weekly or monthly, and its members may vote from time to time, either at ———— school house or at the homes of the members, as club shall elect.

Persons not members of the club may participate in the exercises, but shall take no part in any business transactions.

Sec. 2.—New Members. Any person upon recommendation of a member, and accepted by the Executive Committee, shall become an annual member upon paying the Secretary the regular annual fee.

Sec. 3.—Dues. The membership dues shall be ————, payable annually to the Secretary of the association.

If the funds of the club shall at any time be exhausted, additional funds may be raised by assessment, a majority vote being sufficient.

Sec. 4.—Amendments. The constitution and by-laws of this club can be changed on one month's notice by a two-third vote of the members present.

Sec. 5.—Rules of Order. The usual rules of order for sdch organizations shall govern in the conduct of the affairs of this club.

"In order to start an organization of this kind, it is necessary that two or three interested parties get together, map out a program, announce a meeting in the schoolhouse or other appropriate place, arrange for one or two pointed talks on the object of the meeting, and then have the farmers vote on what breed or breeds they will decide to push in their community. If the interests are divided and no one breed predominates, it is possible to have two or even three successful breed associations in the county or community.

The improved stock breeders of Kansas have done a great work in educating the farmers of the state to know the value of good live stock, and the educating process must be continued until the scrub bull, the scrub stallion, the scrub boar, the scrub ram, and even the scrub rooster shall be driven from every county in the state. I can conceive of no single movement that will bear greater fruitage than working up a local interest and a local pride in some breed of improved live stock." —Prof. O. H. Otis, before Kansas Live Stock Breeders' Ass'n. 1908.

Our Prince Edward Island Letter.

Editor Maritime Farmer:—

Fine, warm weather during the last week of July has given farmers a chance to harvest the heaviest hay crop we have grown in the Province since 1901, which was also a very early season.

This is, indeed, the busiest season of all the year and as the feeding value of the hay crop is so much influenced by the condition in which it is housed, every effort must be put forth to take advantage of what clear weather is granted us as it certainly pays to make "hay while the sun shines." The hoed crops, too, all need close attention. Dairy cows and other stock must be stabled and fed some soiling crop. Potato bugs, horn flies and every other pest known in the country are doing their very worst just at this busy season, and I often think this is the time when the executive ability of a farmer, if he has any, is plainly shown, by the way he manages his work so that everything is kept doing its best as far as he can control it.

Too many of us are inclined to undertake, or as the slang phrase has it, "bite off more than we can chew" and on the vast majority of farms more help could profitably be employed. Often do we see fields of potatoes at this particular season of the year, being ruined by the bugs, the owner well aware that the crop may be from fifty to one hundred bushels per acre short in the fall, through the neglect that would now cost not more than a few dollars. Weeds get a start in the turnips and corn that will lessen the harvested value of these crops many times more than the cost of labor, at this season, to clean them besides lessening the future detrimental effect that weeds, etc., will have on the earning power of the farm.

Farming is surely a complicated profession, and in no other vocation can there be greater scope for good judgment and demonstration of sound business methods, than in the intelligent application of labor. Just how much help it really "pays" us to hire, or what kinds, and cost of machinery it "pays" to purchase are worthy of serious considerations.

Few there be but will admit, that rather than have a valuable crop spoiled it certainly would pay to hire at any reasonable cost enough help to properly save it. Yet we continually see fields that are being neglected through the excuse that it is impossible to give the necessary attention just now, when these same men will agree that it would have paid them many times the cost of the labor to have done it. This question of hired help is one that many of us are not consistent about. If it really pays to keep more help then we, certainly should. Wages are lower here than in any Province in the Dominion and consequently a large number of our population, yearly leave us to take up this work in other parts of Canada. The same might be said about farm machinery. Agents will give you figures to prove that almost every machine they have to offer will be a good dividend paying investment and providing the purchaser has the raw material sufficient to warrant the investment, and he continues growing or distributing this as the case may be, each and all of these machines will pay for themselves. But, the trouble is that all of these things must be paid for long before they earn their cost unless it is a case where they are jointly or largely used. Few will properly look after their machinery so as to get the longest service out of it, not only as to the housing, but as to the keeping in repair. All farm machinery would have double the life if it was gone over each season by some person who thoroughly understood it, and seen where many things could be tightened and thus fulfil the proverb "a stitch in time saves nine."

Just now, the cultivator is the machine that should be kept going as often as possible, especially after a shower of rain.

All our farm crops at this writing, August 4th, with the one exception of potatoes and perhaps corn, look better than we have ever seen them at this season. Hay is unusually plentiful and is being offered at ridiculously low prices to the local trade, mostly by farmers, who seldom have any surplus and don't seem to appreciate how this crop could be turned into live stock or their products and increase the valde of their next year's crop as well.

Grain will be a splendid crop and is standing up well. Turnips are growing very fast. Corn, which had a set back during the damp, cool weather of June is now pulling fast and pastures are ideal. Apples will be a fair crop also, and the fruit and other trees have made a most wonderful growth due to the moist season. Altogether this promises to be the best, or one of the very best, season's this Province has ever had.

W. M. LEA.

Victoria, P. E. I.

Finds Valuable Ideas In The Maritime Farmer.

Editor Maritime Farmer:—

I am very much pleased with your farm paper as I find good advice its pages. For instance:—"Butter Defects and How to Correct Them," written by Prof. M. Michels, of the University of Wisconsin, in your issue of July 26th, also the value of Underdrainage in your issue of Aug. 9th. It is very important that the farmer should properly drain his land in order to get good results from his labor.

Farming in the Maritime Provinces has undergone a radical change in the last number of years. I can remember when the grain crop was first and the dairy was a secondary consideration, now we find the reverse is the condition. There has been high, sandy loam and grow good no doubt, too much grain sold off the farm instead of feeding it to the stock to better enable the farmer to improve the soil without requiring to use so much commercial fertilizer as is used to-day. ...

I follow a rotation of crops on high sandy loam and grow good crops. Barnyard manure is all the fertilizer I use. Never used anything else.

Yours for improvement,

FRANK L. WILMOT.

THE MARITMIE FARMER

And Co-operative Dairyman.

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association The Nova Scotia and P. E. Island Fruit Growers' Associations The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers Association, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front Page is, in every case, the time which your subscription is paid.

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AUGUST 23, 1910.

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September.....6—20
October.....11—25

THE CUBAN POTATO TRADE.

The Cuban market as a source of disposing of some of the surplus potato crops of Maritime Canada has in recent years, been receiving considerable attention. In the June 24th issue of the Trade and Commerce Report, Mr. E. S. Kirkpatrick has the following :

"The monthly report of the Department of Trade and Commerce at Ottawa for March, recently published, gives a condensed report of the total volume of Canadian trade with all countries during the past fiscal year. Of 36 countries, apart from British possessions, for which returns are shown, the little country of Cuba has a good record, taking seventh place among these foreign countries to which Canada had an export trade, while for the month of March it occupies fourth place. By including as well British possessions, making a total of 48 countries, Cuba takes twelfth place for the year and eighth place for the month of March. The returns show an aggregate increase of trade for the year between the two countries of 23 per cent of $429,730 of which amount the increase in exports was $334,374.

"Of the Canadian exports to Cuba, the greatest increase for the year has been in potatoes, the total shipment for the year amounting to $605,893, or almost half of the Canadian exports of potatoes to all other countries combined. The increase over the preceeding year amounted to $103,834. This does not show the increase in volume, as the prices have been, on an average, from a third to a half lower than those of former years, so that the increase in quality is proportionately greater.

The statement has been made that it is folly for the Canadian farmer to look to the Cuban market as a profitable one for potatoes, and the prevailing prices of the past season are quoted as evidence. The fact, however, remains that, when last year's potatoes were planted, very few Canadian farmers had ever thought of the Cuban market. The prospect of such, therefore, had no bearing whatever on the acreage planted. But it was supposed, as in other recent years, the home market would be a profitable one. It is equally certain that, had it not been for the Cuban market, which absorbed such enormous quantities when the home market failed, potatoes could not have been sold at any price in Canada. The low prices were due to over-production both in the United States and in Canada, and it was only the low prices quoted in Canada which prevented United States shippers from flooding this market with their surplus, enjoying as they do the advantage of a preferential tariff.

"To illustrate the close competition between the two countries for this market, it might be stated that one buyer recently found that on an increase in his freight rate from Canada of but ten cents a barrel, he could land potatoes in Havana from the Boston market cheaper than he could from Canada. Throughout the season United States shippers made every effort to capture the market, quoting lower and still lower prices until they were being offered here at $1.50 ber barrel c.i.f. When this figure was reached it appeared at this office as though it would be impossible to make shipments. A report was therefore sent to the department to this effect. But although the price dropped further to $1.40, and the New Cuban crop was on the market, Canadian potatoes still arrived in undiminished quantities, and are still holding the market to the exclusion of all others from foreign countries.

"The past season has been largely an experimental one, for it is certain that but very few of those who found a market here had had any previous knowledge of Cuban trade. Undoubtedly many errors resulted in consequence. It has demonstrated, however, many valuable points. First in importance is the fact that Cuba offers a safe and ready market for many of the products of Canada which fact cannot be too strongly emphasized. It has further shown the importance of frequent steamer sailings, without which no progress could have been made. With the growth of the trade the service must be developed still further until it is on a par with those operated from other countries doing business here. Cold storage facilities will be essential, and when such are provided an excellent market will be available for dairy products, eggs and fruits. The manner in which apples have been shipped here from Canada in the past has been a farce, and there is an excellent field here for those who cater to the market in an intelligent way. If the tourist travel from Cuba were sought, a considerable part could be secured. At the present season the New York boats are so crowded that reservations have to be made weeks ahead.

"There is no question that many of these people would spend their summers in Canada if they were offered any inducements. Some other points which might be mentioned are : that the trade of Canada with Cuba is not limited to the winter season but may be continuous throughout the year ; that potatoes when properly handled may be shipped here in bags as well as in barrels and will command an equally ready market at a considerable saving in expense ; the proper shipping papers are absolutely necessary in order to save delay and expense ; and that an intelligent co-operation on the part of exporters would do much to create better prices and more profitable returns.

"An important point to be borne in mind is that the bulk of the imports in Cuba are handled through the medium of commission firms and brokers. In probably no other country will there be found such a large percentage of such firms.

Of the various exports which Canada sends to Cuba, it is safe to say that 95 per cent is handled through brokers, and it is impossible to deal with the big importers in any other way under present conditions. Commercial travellers coming here almost invariably get in touch with a brokerage firm and do their business through them. It is most important that the exporters of Canada secure the the best possible and work through them, as it will be found to be a waste of time to try to do business in any other way.

REACTION IN FAVOR OF THE FARM.

To observant people it is manifest that a healthy reaction has been going on in the popular mind regarding the pursuit of agriculture. The evils produced by overcrowding of other occupations are beginning to be appreciated and farming to be dignified by the light which science is shedding upon it. To be a good farmer now requires more than mere unenlightened patient drudgery. The calling demands knowledge, constant study, patient experiment and tireless industry. The farmer feeds the hungry of all classes ; he deals in commodities which must be purchased. He is the most independent man of the present age. There was a time when a successful struggle for simple existence satisfied the tiller of the soil ; but science, with her schools and colleges, railroads, telegraph and steam boats has made vast changes. The glitter and tinsel of cities, the imaginary honor of the professions, the apparent ease of accumulating wealth in commercial pursuits on the one hand, and the snail-like, hum-drum, hard work life on the other, have driven many young aspiring men to forsake farming for some more progressive occupation. No avocation in life is more exaulted and pleasurable, and no other is more scientific if properly pursued—not one is more conductive to health and happiness ; no calling will tend to unfold more fully the whole capabilities of body and mind, or to deepen convictions of an all-wise Creator. But to succeed at the present time, he who engages in it must listen to the teachings of science and experience as recorded by wiser men than himself. Then, with sound judgment and an honest pride in his calling, the farmer may exalt his avocation, and in turn be himself exalted. The son himself will gladly follow in his father's footsteps, and the daughter will delight to grace the home of comfort and happiness on the farm. To make farm labor honorable, pleasant, and profitable, by making it intelligent, should be the aim of of every true Canadian farmer. The farmer must do his individual part in meeting the world's demand upon his country. In no way can this be done to better advantage than by storing his mind with knowledge bearing upon his calling. Since the object of human labor is to bring enjoyment, the sooner the farmer learns to accept every advantage offered him the sooner will rest and comfort come to him.

A GOOD FARMER.

The term a "good farmer," should be as much appreciated as a good lawyer, or a good doctor or a good teacher. To succeed at any of these, knowledge of the profession and skill in performing the duties appertaining to the work is required. Few will deny that farming requires skill, industry and perseverance. Then why is it not as much honor in being a good farmer as it is a good professional man? There are many reasons why a good farmer should be honored. Generally speaking progressive farming requires more skill and intelligence than the average professional calling.

INDUSTRIAL VIRTUE.

One hour of good, honest work is worth more to keep a boy straight than two hours of admonition. Industry is a wonderful promoter of personal integrity and the consequent piece of society. The idea of the trade schools, a place where the boy or girl shall educate the hand as well as the head, reaches straight back to the promotion of the moral sense, as well as other things. It would be an interesting fact, to know how many of the confined criminals, who are confined in our prisons, had ever acquired a trade. Preachers and teachers have not yet well understood the moral regeneration that comes from work.

EDITORIAL NOTE.

"A man should never be ashamed to own that he is in the wrong, for it is but saying in other words that he is wiser today than he was yesterday.'

Concrete on the Farm.

Concrete for many years has been in use in Canada and other countries for large structures, such as bridge abutments, piers, breakwaters, arches, etc., but only within the last few years has it been used extensively for construction work on the farm. The scarcity of wood and other building materials makes building on the farm today a different proposition than that of 20 years ago. In many localities, where twenty-five years ago, timber was abundant, today there only remains a few straggling trees which adorn the lane-ways and groves on now well-cultivated farms. In those days the progressive farmer could always get pine, hemlock or other suitable material within a few miles of the place where the same was required for use and number one pine could be purchased for at from $8 to $10 per thousand, which now would sell for from $40 to $60 per thousand.

Within the last fifteen years the manufacture of cement within our own province has become an extensive industry. Production on a large scale and competition have been the means of placing cement within easy reach of every farmer in Canada and at a cost that would warrant its use, in every class of work where it would be practical to use concrete in place of wood or other building materials.

TERM CONCRETE EXPLAINED.

The term concrete might apply to any kind of plastic materials which have been hardened together in one solid mass, but in treating on concrete under this head, we refer to what is known as cement concrete, which may be made from or by the use of several different materials for coarse aggregates, the same having a proper amount of cement added to form a perfect mixture, and cause the whole to set into one solid crystalized mass.

Use only Portland cements. The term Portland applies to cements which have been placed through a certain process of manufacture, and at the same time have been treated chemically or otherwise, according to a specification. All cement which has been treated under this specification may be termed Portland cements. We could specify for use no one certain brand of Portlands, as where all have been treated under practically the same process, there cannot be any great difference in the quality of cement produced by different makers.

MAKING CONSRETE.

In the making of concrete any of the following coarse aggregates may be used: Sand, gravel, broken stone, slag, cinder. Different classes of work call for the use of different kinds of coarse aggregates, but speaking of concrete as that generally used on the farm, we would apply to concrete made from cement sand or gravel properly mixed together.

1st. Build a platform about 12 ft. square, of 1 inch matched lumber. This 1 inch lumber should be securely nailed to 2-4 scantling 12 feet long, placed about 2 feet 6 inches apart, at right angles with the boards.

2nd. Place the mixing board on the level ground.

3rd. Prepare a square frame. The size of this frame depends on the amount of concrete to be mixed at one batch. For example, we would presume that we desired to make a 1 to 8 mixture. This frame should be made in size to hold 8 cubic feet of sand, which will be mixed with one bag of cement representing 1 cubic foot. For this size of batch the most convenient size of frame would be 3x4 and 8 inches deep. Should it be desired to mix larger batches, the frame might be made wider, but it is not advisable to have the frame in any case more than 10 inches deep.

4th. Lay the frame on the centre of the mixing board, the long way of the frame to lie at right angles with the lumber in the mixing board, this will prevent the shovel from tearing slivers from the mixing board.

5th. Fill the frame half full of sand and level the same with a shovel.

6th. Add one-half bag of cement. Spread the same evenly over the sand.

7th. Fill the frame full of sand or other coarse aggregates to be used. and once more level the top of the same.

8th. Add the remaining half bag of cement. Spread evenly over the top of sand.

9th. Remove the frame, which will leave the ingredients lying in a long pile on the mixing board.

10th. Start at one end of the pile and turn the same over completely three times, each time the same should be turned into a pile of conical shape.

11th. Spread out on a board about 8 inches deep and sprinkle with a watering can, then turn over two or three times more and the concrete is ready for use.

WATER NECESSARY.

The amount of water required for concrete depends upon what the concrete is to be used for. It is generally admitted that concrete having sufficient water to make the same thoroughly moist is better than that made from a very dry mixture, and on that account it is always well to use wet concrete in every kind of work where the same is practicable or for such work as cement silos, stable floors, abutments, retaining walls, watering troughs, or any class of work where the mould has not to be removed immediately.

In speaking of wet concrete, we would refer to concrete having sufficient water added that after the same has been tramped into the mould the water will just begin to rise to the surface. An excessive amount of water will cause the cement to rise to the surface and thus injure the concrete.

In speaking of dry concrete, the term applies to concrete having only sufficient water added to moisten the surface of all particles. This mixture in appearance will resemble wet earth or if a quantity of dry mixture is squeezed in the palm of the hand the same will compress into one solid mass but will not adhere to or moisten the palm of the hand. This kind of concrete is used for such work as the manufacture of concrete block, concrete brick, concrete tile, or any class of work where it is necessary to remove the mould immediately.

Concrete is used extensively on the farm for such work as building cement cisterns, cement walks, cement floors for stables, barns, barn walls, foundations, and is always used very extensively for buliding dwelling houses in the form of cement brick and block.

CONCRETE BLOCKS.

Concrete blocks are now being used extensively for building barn foundation walls, and for dwelling houses throughout. Many improvements have been made in machines for manufacturing blocks in the last few years. The latest machine is that which might be termed the Face-Down Machine. The face down principle allows the block to be faced with richer material or colored. The face of a block is usually made of a mixture of one part cement to two parts of sand, then the body of the block is made of coarser material of poorer proportions. This method of manufacture makes an absolutely water proof block. This type of machine also provides for the stone to be made in any size or design and thus meet every architectural requirement. On account of sand and gravel being plentiful in most localities, the manufacture of concrete blocks on the farm is becoming an extensive business.—O. A. C. Review.

Attaching Gasoline Engines to Separator.

The following article on "Attaching Gasoline Engines to Cream Separators," appeared in a recent issue of Hoard's Dairyman and will be interesting reading for all those who purpose putting this labor saving device in their dairy:—

"In a recent issue a party asks about attaching a gasoline engine to the cream separator, and is advised to get detailed information from the agents. As selling agents are sometimes so desirous of making a sale that they will sometimes stretch a point, their advice is apt to be misleading. At least I know of one such instance where the farmer bought the engine on the strength of the agent's recommendation that it could be stationed in the small milk room in the barn where he did the separating. The party knew little about gasoline engines at the time and taking the agent's word, ordered the engine, thinking that it could be stationed in the small room in the barn. When the company's expert came to set the engine up, he soon ordered a different place, and the result was that it had to be set out-of-doors and a building erected over it. So one cannot always place strict reliance upon agent's claims and must accept their advice with a pinch of salt.

A gasoline engine may be stationed in any milk room that is large enough, and it does not require a very large space. One should provide a solid foundation, preferably of concrete for both the engine and the separator. The engine cannot be connected direct to the separator, but must be operated through a line shaft. A belt from the driving pulley on the engine turns the line shaft, and the line shaft must have a proper sized pulley to connect with the separator. While there is no danger from fire with a gasoline engine in the barn, yet insurance companies have certain restrictions and charge extra insurance. Before buying, it is a wise plan to consult the insurance company and make sure that the type of engine is an approved make. The supply tank, from which the gasoline is pumped by a pump on the engine, must be at least 50 ft. away from any building.

In getting the pulleys for the line shaft one must take into consideration the driving pulley on the engine and the pulley wheel on the separator. The speed of the engine is generally at a fixed number of revolutions per minute and the speed of the separator must be regulated entirely by the size of the two pulleys on the line shaft. One general rule to be kept in mind: If the diameter of the driving pulley (or the one on the engine) is the same as the driven pulley (the one on the line shaft) the revolutions of the driven pulley will be the same as the driving pulley. If the diameter of the driving pulley is less than the driven pulley, the revolutions of the driven pulley will be decreased; and if the diameter of the driving pulley is greater than the driven pulley, the number of revolutions of the driven pulley will be increased. In other words, if the driving pulley on the engine is a nine-inch pulley making 360 revolutions per minute and connects with an 18 inch pulley on the line shaft, the speed of the shaft will be less than that of the engine, or 180 revolutions per minute as the speed varies in proportion to the diameter of the two pulleys. The same mathematics applies to the pulley on the shaft which connects with the one on the separator, except that instead of being the pulley driven it is the driving pulley.

A simple rule for finding the number of revolutions of the line shaft per minute, is to multiply the diameter of the engine driving pulley by the number of revolutions the engine makes per minute, and divide the result by the diameter of the driven pulley on the shaft. For example if the engine pulley is a nine-inch making 360 revolutions per minute and the one on the shaft is an 18-inch:

$$\frac{9 \text{ (dia. of engine pulley)} \times 360 \text{ (rev. per m.)}}{18 \text{ (dia. of shaft pulley.)}} = \text{equals 180 revolutions of shaft}$$

The pulley on the shaft may be of any size, but it is desirable to reduce the speed at least half for separating, which is done by getting a pulley twice the diameter of the one on the engine.

Now the separator must be turned at a certain number of revolutions per minute and the problem must be worked backwards. If the pulley on the separator is a 12-inch and must make 50 turns per minute, and the revolutions of the line shaft is 180 per minute, we must find what diameter of the line shaft pulley will run the separator at the required speed. A simple rule for finding this is to multiply the diameter of the separator pulley by the number of revolutions it must make per minute and divide the result by the revolutions the line shaft makes per inute. The answer will be the size pulley required. For example, the separating pulley is a 12-inch and must make 50 revolutions per minute, and it has been previously learned that the line shaft makes 180 revolutions per minute:

$$\frac{12 \times 50}{180} = 3\tfrac{1}{3} \text{ size of pulley required.}$$

This pulley generally has to be made special as it is apt to be an odd size. One cannot substitute the next size to it, either larger or smaller, because it would change the speed of the separator which is never advisable if thorough work in separating is expected.

The belt from the shaft to the separator should be loose so that the separator will be put under motion gradually. The engine starts out at full speed, but the belt connecting the separator being loose, slips and starts the separator as evenly and slowly as one can do it by hand, and when once started maintains the speed at a uniform unvarying motion.

A gasoline engine is a wonderful help in separating, doing the work cheaper than one can hire it donr or afford to take the time to do it himself. It is not a difficult task to attach it to a separator and may be done by anyone possessing ordinary mechanical ability. The main points are to have solid foundations for the engine and separator, a line-shaft on which are the proper sized pulleys and a loose belt for separating. Other pulleys may be put on the shaft and these connected with the churn, pump, or mill machinery.

LYNFORD J. HAYNES.

Pennsylvania.

Dysentery is a dangerous disease but can be cured. Chamberlain's Colic, Cholera and Diarrhoea Remedy has been successfully used in nine epidemics of dysentery. It has never been known to fail. It is equally valuable for children and adults, and when reduced with water and sweetened, it is pleasant to take. Sold by all dealers.

HORTICULTURE

The Pre-Cooling of Fruit for Shipment.

The so-called pre-cooling of fruit, vegetables, or other produce, consists of an arrangement whereby the circulation of air which is chilled with a refrigerating machine, is directed through a loaded car by means of temporary and adjustable pipes or ducts. That is to say, the car is placed in the same relation to the refrigerating machine for the time and trouble. It would take too in a cold storage warehouse.

My attention was first drawn to this system by the work of the bureau of plant industry of the United States Department of Agriculture in California where they experimented in connection with the shipment of citrus fruits and vegetables in conjunction with the Pacific Fruit Express Company, a subsidiary company of the Southern Pacific Railway system, and by correspondence with Mr. L. A. Roy, of Chicago, who is interested in the promotion of the idea.

Two years ago I fitted up the necessary connections at the St. Catharines Cold Storage and Forwarding Company's warehouse, but we were never able to give it a fair trial on account of the small size of the plant. The partial cooling which was affected was undoubtedly of some benefit, but hardly worth the time and trouble. It would take too long with the six ton machine in use there. The pre-cooling of a car load of warm fruit, in addition to the chilling of the car itself, which is a considerable item, takes about two of refrigeration and as it should be accomplished in about four hours, it is equal to a machine capacity of twelve tons in twenty-four hours. If two cars were to be cooled at one time, it would require a plant of at least twenty-five ton capacity. Further, in order to be effective, the cold blast should have a temperature of not more than twenty to twenty-five degrees and that precludes the possibility of using the same circulation in the warehouse where the temperature in the fruit rooms must not go below thirty-two degrees. As long as the fruit in the car is warm, the cold air blast can safely be reduced to several degrees below the freezing point, but this is not permissible in a warehouse where the contents are already reduced to the minimum of safety.

During the summer of 1909, I had an opportunity of inspecting the large plants which have been erected by the Southern Pacific Railway in California. They have spent $1,500,000 on two plants, one at Roseville in northern California and the other at Colton in the southern part of the state.

These two plants are at interior points where the traffic converges for the overland journey. The one at Colton has 500 tons of refrigeration and can handle a whole train of cars at one time. In addition to the cooling facilities, there is a large equipment for making the ice with which to fill the bunkers of the cars.

You will observe that these cooling facilities are being provided in California by the railway company and I am of the opinion that it properly falls to them to do it. In the first place, they benefit by the saving of ice, and a plant erected by by the railway can be made to serve a whole district at very less cost than the aggregate cost of erecting a number of small plants. Moreover, it should be the business of the railways to carry the freight which is entrusted to them in the best possible manner and, if pre-cooling comes to be one of the necessary aids to the transportation of Canadian fruit, it seems to me that it is up to the companies to furnish it.

I can see the possibility in the future, or I might say the practicability of operating a plant, say at Hamilton, to serve the district between Niagara and that city in connection with western shipments. With some system of prompt movement of the cars from loading points to the cooling centre, they would be started on their overland journey without serious delay and with the best possible chance of reaching their destination with the contents in good condition.

It will be evident from what I have said that pre-cooling does not differ in principle from the cooling which is effected by placing the goods in a cold storage warehouse, but if it is conceded, and it certainly may be, that immediate and rapid cooling is important in the handling of perishable produce, then it must be admitted that, under certain circumstances, pre-cooling has decided advantages. One advantage over cooling in a warehouse is that it saves handling the fruit and the consequent exposure to warm air while being transferred from warehouse to car, a thing to be avoided as much as possible. With proper equipment, a car-load of fruit may be cooled in this way as much in four or five hours as it would be in two or three days with ice only in a refrigerator car. A more rapid circulation of air at a much lower temperature than can be secured with the use of ice removes the heat in a comparatively short time.—From an address on "The Cold Storage of Fruits," delivered before Ontario Fruit Growers' Association at its last convention, by J. A. Ruddick, Cold Storage Commissioner, Ottawa.

Selecting and Exhibiting Fruit at the Fall Fairs.

A very common expression overheard at our exhibitions is "I am sorry that I did not show some of my Baldwins or Northern Spy apples. I am sure they would have taken the prize as they are finer than these shown." The same in vegetables, grain and other products of the farm—sometimes the regret takes an acute hold of them and they make the effort and show next season, but in too many cases the desire may exist, but they forget or are indifferent till too late and another exhibition comes around with the same futility of effort and the same regrets at not showing. Again it is to be noticed at many fairs that certain exhibitors take all the prizes every year, not that they have any better fruit or more varieties than their neighbors, but simply they have got the habit, have broken the ice by deciding to show, may have fared, but indifferently the first year, but they gained information, got experiences as it were learned the requirements, made better selections with consequently more success thereafter.

It is impossible to estimate the educational benefits to be derived from a fall fair in any line of occupation. We are here shown the highest and greatest results and the consequent stimulus will last indefinitely and leaven one's whole future.

The determination to exhibit should be made early in the season, and a careful eye cast on prospective exhibits. Frequent inspection, looking for promising specimens of apples, for instance, is a most interesting and pleasureable of employments, instruction by observation and beneficial in results. It points out to the farmer or fruit grower errors to be corrected, suggests improvements to make, discovers insects and destructive pests, points out where pruning should be made in season, and in fact reveals by the critical survey the whole condition of affairs, good, bad and indifferent.

Here then we see already the influence for good expected by the fall fair in thus simply preparing for for it. To have the best fruit induces careful cultivation by the

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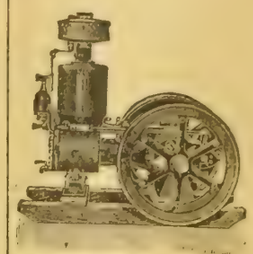

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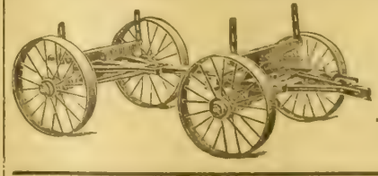


Dominion Wrought Iron Wheel Co., Ltd., - - Orillia, Ont.

grower. To win the prize for the best plate or the best bushel or the best barrel of Greenings the farmer takes to draining his orchard, to manuring and fertilizing, to pruning and thinning the fruit. Following up these methods he benefits his whole crop and reaps an hundredfold in credit to his industry and intelligence—he rises in the esteem of the residents of the locality. The winning of the first prize is far reaching in its results. It may be but nominal in value, but it is an incentive and a stimulus to the winner. He becomes a subject for discussion, his movements are to be copied, and methods imitated.

The following points are to be considered in selecting fruit: First size, second color, third freedom from speck or deformity. When gathering be careful to leave stems on and to secure this, seize the fruit by the stem, giving it a slight twist. Handle carefully in a basket and place on a table in rows. Have plenty of the best to select from and have specimens of an even size. It pays, when packing for the show, to wrap each specimen up separately in some paper to prevent bruises. The largest and finest fruit are grown on the young trees just coming into bearing, but good fruit can always be had on old vigorous trees.

As prizes are usually given for dessert, fall and cooking fall—Winter dessert and Winter cooking, the following varieties of apples are usually shown:—

Dessert Fall.—Gravenstein, St. Lawrence, Ribson Pippin, Jersey Sweet, Autumn Strawberry.

Fall Cooking.—Duchess, Colvert, Twenty Oz. Fall Pippin, Blenheim Orange.

Winter Dessert.—Snow, Spitzenberg, Northern Spy, Swazee Pomme Gris., American Gold Russet.

Winter Cooking.—R. I. Greening, Northern Spy, King Tompkins Co., Baldwin, Yellow Bellflower, Newton Pippin.

The foregoing list embraces 20 vgrieties, but many big orchardists may have double that number with profit. When close to good market, early varieties as Early Harvest, Red Astracan, Duchess and others may be grown profitably, but for shipping purposes the fewer varieties the grower has the better. For showing purposes as well as to see how they flourish in the neighborhood and as alternate varieties in off bearing years, it is well to have a good assortment of kinds.

Some exhibitors of fruit take great pains to polish and shine the fruit up—a practice praiseworthy and allowable on a fruit stand, but never should be practised when competing for a prize. To an experienced judge this is prejudicial to the exhibit, as it destroys the natural bloom of the fruit, one of its particular charms.—J. McPherson Ross, in Canadian Farm.

Growing Apple Trees From Seed.

It seems to me that the horticulturist has the opportunity of getting more enjoyment out of this brief and uncertain life than those engaged in almost any other avocation, and as his joy is mingled with his work he becomes an artist after the style of Gideon, Harris, Patten and a large number of others who have made themselves such benefactors to their fellow men, not only to horticulturists but to the people of the entire world.

He not only puts joy in his work but he is a philanthropist in every sense of the word, for he has bestowed upon his fellowmen something that could not be purchased by wealth or influence. To me, the propagation of seedling apples or fruit of any variety is one of the most fascinating occupations or pastimes a person can have. If there is anything well known, any fact undisputed among horticulturists, it is that as a rule no tree fruit will exactly reproduce itself from seed. While this is true of all tree fruits, the apple tree is remarkable, in that valuable varieties never reproduce themselves.

The only cases known in pomology where an apple tree is produced the second time from the seed is in cases where they revert back or nearly so to the wild stock from which they originated. Pyrus baccata and all such trees are absolutely without any value whatever except to be used as stocks for grafting purposes.

Plant a bushel of apple seed all taken from, say, the Wealthy. While it would be possible, still it would be highly improbable that out of the whole lot of seedlings you would get a single Wealthy tree. This is true of any given named variety. The absolute facts are, technically speaking, that on planting the bushel of apple seed mentioned, when the seedlings are grown there will be no two trees alike in every respect, and, what is more, there will be no tree that is exactly like any known tree heretofore grown, with the exception of those which revert back to the original stock as before stated. Many valuable varieties will be found among them, but all differing in some way from kinds now grown and classified. Consequently, to perpetuate a given variety, grafting or budding in some form must be resorted to.

To produce hardy apple seedlings where very few apples are grown, sow the seeds of apples produced in the locality or as near to it as possible. Seed sown from apples produced in the South or East produce seedlings that are of no value in this country; this we have tested thoroughly on our own grounds.

Another thing noticed in connection with the growing of apple trees from seed is that an apple seedling that has never been transplanted may be to all appearances quite hardy so far as the old tree is concerned, but when an effort is made to propagate it by grafting, the grafted trees are found to be quite tender. Again we have had seedling apple trees grow until they were 7 or 8 years old, and be to all appearances quite hardy, carrying a few specimen apples, but just as soon as they would come into full bearing, it was noticed the season following that the tree was nearly dead, the effort put forth to mature a full crop of fruit weakening its vitality to such an extent that it would finally succumb. In connection with this matter I might say that experience has taught me that no seedling fruit tree can be classed as quite hardy until it has been grafted in the nursery, come into full bearing in the orchard, passed through a hard winter, then produced a good crop the following summer.

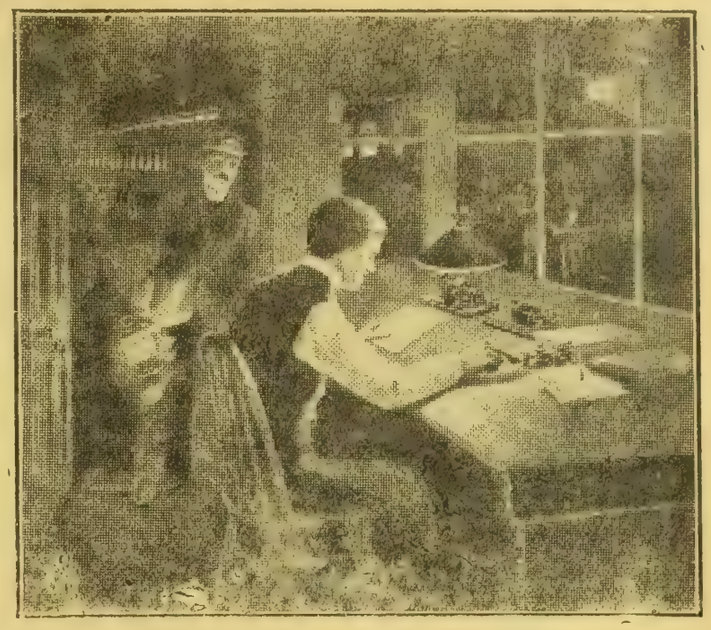
The beginner will now clearly understand that the growing of apples from seedling trees is very much of an experiment and he should be prepared to meet with many disappointments. But there is a great and pressing need for this kind of work in Western Canada. This is a line of work that all those who have succeeded in fruiting the large apple can take part in. Save the seeds and care for the seedling trees till they bear fruit.

In collecting seeds we save the cores of all large apples used, the seeds are removed with a sharp pointed knife, all seeds are sown in the fall if possible, as we can get a better percentage to germinate the following spring. If, however, the

(Continued on page 678.)

OUR FALL TERM BEGINS

Thursday, Sept. 1st, 1910



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LIVE STOCK.

Essentials in Profitable Swine Feeding.

There are a few facts of fundamental significance in the field of swine industry as follows:

First: Swine growers cannot produce the fall litter as successfully as they can the litter that is farrowed in the spring.

Second: Many breeders have repeatedly changed breeds, having tried one breed for a number of years, and not succeeding as well as they thought they might, they have adopted some other breed.

Considering this, in view of the fact that the better one's acquaintance with the breed and the longer the herd is bred and handled in one's hands, the greater should be the success, and in view of the fact that the fall litter is not as successfully grown as the spring litter, it indicates quite clearly that there is something radically wrong or entirely unknown about the system of swine breeding and swine feeding as now practiced.

MAKING OF A HOG.

The feeding of a hog, or in other words, the making of a hog, might be compared to the building of a brick house. If such a house is to be built it requires a certain definite quantity of various materials, such as brick, mortar (made of lime, sand and water), and lumber. Before being able to build such a house the builder must know the kinds of material it requires and the quantity of each kind that is necessary. Likewise, in order to be able to produce a hog successfully the feeder must know the constituent parts of a hog, the amount of each constituent, the character of the feed necessary for the construction of each constituent part, and also the amount of each nutrient or constituent part of the feed that can be handled by the pig to the best advantage for the proper construction of each individual part of the hog.

The hog is made up in general of mineral matter, which is found most largely in the bones; of protein, which is found in the lean meat or muscles and also to some extent in the bones; of fat, as illustrated by the fat cells distributed throughout the fatty tissues of the carcass and the lean meat or muscle; and the water, which is found in all of the tissues, especially in the softer tissues. In round numbers about 50 per cent. of the live weight of the hog is water.

Something cannot be made out of nothing. Furthermore, the animal body cannot substitute indefinitely. While carbohydrate can be used to some extent in place of fat and fat in limited quantities in place of carbohydrate, the animal body cannot make mineral matter out of anything else and neither can it make protein out of carbohydrate, fat or mineral matter, and water also must be supplied and it cannot be made out of dry matter.

MUSCLE OR LEAN MEAT.

If a hog is to develop as it should and make the required amount of fat it must have first, sufficient muscle or lean meat. If it is to have an abundance of muscle or lean meat it must first have bones to which to attach these muscles. If the hog is to have fat, muscle and bone it must also have sufficient water to go with these or else it cannot produce anything. In other words, a hog must be symmetrically fed if it is to develop at all.

The first consideration should be the development of bone. If a hog is not fed sufficient mineral matter it cannot grow otherwise. In an old civilized country mineral matter is not usually as abundant as in a new country, because the soil is more or less robbed of its mineral constituent which is used up as plant food. Furthermore, different sections of the same country and different countries contain different mineral matters of various kinds; and again, as there is no standard for the mineral requirements of swine, there are no set rules according to which mineral matter should be fed. In order therefore to supply this part of the metabolism mineral substances such as common salt, bone meal, or ground phosphate rock, air slacked lime, wood ashes and charcoal, should be kept before the hogs in separate troughs so that they can have free access to it at all times. They will then be able to supply their mineral metabolism according to the dictates of their appetite.

USE OF CLOVER.

In order to furnish the hog with means with which to build up his muscle or lean meat tissue he must be given the required amount of protein in his feed. Protein metabolism cannot be supplied with any other nutrient. A protein feed that is available to the swine feeder for this purpose is clover, which is roughage and cannot be used exclusively as a source of protein except for mature hogs. The concentrated nitrogenous feeds are such as skim milk, soy beans, cow peas or Canada field peas oil meal, tankage, etc. The last two, however, are commercial feeds and should not be used except when absolutely necessary. As for instance, when they can be bought more cheaply than the others can be produced or when the home supply is exhausted.

A great deal of work has been done by the writer at the Illinois experiment station to determine the amount of protein necessary for a maximum and most economical production. This is thoroughly outlined and discussed in station publications of the Illinois Agricultural experiment station, and also in a book by the writer on "Swine Breeding, Feeding and Management."

EASY TO STUNT PIG.

It is necessary to feed the required amount of protein and it is just as important not to feed too much as it is not to feed to little. It is a very easy matter to overfeed a pig on protein so that he will never grow as large, neither make gains as profitable as he would if this had not occurred. Again, it is a comparatively easy matter to feed a pig so much protein that he will become permanently stunted and if he is fed a little more he may actually be killed.

Pigs are usually fed in droves. The smaller the drove the better is the opportunity for an equal distribution of the feeds, and especially the protein feeds, among the individuals of the drove.

In order to get the best results, it is necessary to distribute the given amount of protein feeds to the individuals of the drove as well as it is necessary to give the bunch the right quantity. As a means for proper distribution of nitrogenous feeds it is suggested that these might be ground and mixed with the carbonaceous feeds and water into a slop. If grain is not to be ground and if protein is to be fed in the form of beans or peas, these might be scattered thinly on a pasture so that the pigs are compelled to gather them, and while they are doing this and at the same time masticating them, it is a pretty good opportunity for distribution, especially if the pigs in the drove are not too numerous and are of the same size and age. If these beans or peas can be fed together with the vine the possibility of better distribution

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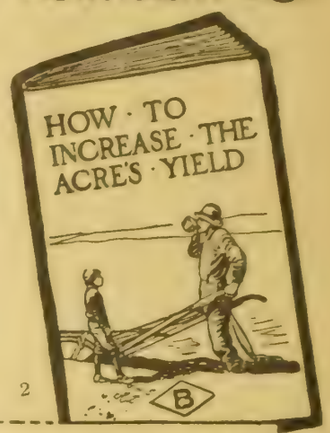

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Besides causing great discomfort, this condition makes it impossible to get the full benefit from the food eaten, and the body is continually starving with a full stomach.

Father Morriscy's No. 11 Tablets promptly relieves this and other stomach disorders. Each Tablet has the power of digesting a pound and three-quarters of food, so that even though the stomach may be in a very bad or weakened condition one tablet taken after each meal will insure proper digestion and prevent sourness, gas in the stomach, pain or discomfort.

The case of Miss Maggie Leahy, of West Franklin, Ont., is a sample of what Father Morriscy's No. 11 Tablets can do. Writing on Jan. 5th, 1910, she says:

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If you have been troubled with Indigestion or Dyspepsia a course of Father Morriscy's No. 11 Tablets will soon put your stomach into a healthy condition again.

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will be still greater. Carbohydrates, such as is found most abundantly in corn, among the common farm feeds is used by the animal body for the production of energy, heat and fat, and must be supplied to the pig in proper quantities, daily, per 100 lbs. live weight the same as the protein in order to get best results. The quantity of this is also discussed in the above mentioned publication.

GROWING AND FATTENING PERIODS.

The life of the market hog for most successful feeding should be divided into two periods, the growing period and the fattening period. During the growing period, when bones as well as lean meat are produced, together with the fat, the pig need more mineral matter and more protein than he does during the fattening period, when he is producing fat more largely, consequently it is necessary to feed more protein and mineral matter during the growing period, and when this is properly done the pig can use carbohydrate or corn successfully during the fattening period in larger quantities proportionately than he can during the growing period.

By supplying the pig the right quantity of mineral matter, protein and carbohydrate it might seem to the casual observer that he ought to develop fairly well because the carcass of the hog as ordinarily viewed is made up of bones, lean meat and fat which, leaving the water out of consideration are made up of mineral matter, protein and fat or carbohydrate. The writer, however, has recently determined that it is just as important for maximum development to feed the right quantity of water and that this should be varied during the life of the growing hog.

It has been shown that the pig at 2 months of age requires twelve pounds of water daily per 100 lbs. live weight, and that this should gradually be reduced to four lbs. when the pig is 8 months old and in prime condition ready for market.

It has also been shown that if the pig is given either dry feed or thick slop and free access to water he will drink too much during the summer and will not drink enough during the winter. Neither condition will be conducive to greatest or most economical gains, consequently it is necessary for most successful swine feeding to feed the right quantity of water as well as of mineral matter, protein and carbohydrate. For further discussion of this subject the reader is again referred to the above mentioned publication.

CANNOT LIVE WITHOUT AIR.

An animal can live for weeks without dry feed, can live for days without water and can live only for a few minutes without air, consequently the oxygen obtained from the air is of the greatest importance as a supply of food. In order to obtain sufficient oxygen to properly metabolize and use the feed that is taken into the stomach, such as corn, milk, soy beans, clover, etc., which furnish the various nutrients like carbohydrate, protein and mineral matter it is necessary that the pig's respiratory apparatus be properly developed and properly used. In order to use this properly it is necessary to give the pigs sufficient exercise because exercise is conducive to respiration.

In order to develop this part of the pig properly it is necessary that he should be bred right and fed right for at least five generations before he is born. In order then to feed a hog properly it is not only necessary to supply him sufficient mineral matter, sufficient protein, sufficient carbohydrate and enough water to go with these, but it is also necessary to see that he gets an abundance of oxygen to properly use up what he takes into his stomach and which is digested and goes and meeting the oxygen that comes into the circulation, coming into the lungs and meeting the oxygen that comes into the lungs by means of the nose.

WHY FALL PIGS FAIL.

One of the main reasons for the lack of success with the fall pig is that during the winter season not enough water is taken for proper development. Another reason, perhaps, may be that a great many times not enough protein is supplied. A third important factor is the oxygen factor which is determined by means of exercise. Aside from these three principal considerations there are other minor considerations, such as protection from cold, furnishing a dry place to sleep, freedom from cold-draughts, plenty of sunlight, etc.

One of the main reasons for the continual change of breeds is the fact that feeding is improperly done so that herds run down, where if they were properly fed, they might gradually be built up and improved.

Thus it can be seen that success in swine breeding, as well as in swine feeding depends primarily upon supplying the pigs with a proper quantity of the various digestible nutrients, such as protein, carbohydrate, ether extracts, mineral matter, water and oxygen, and, furthermore, that pigs are fed right during a long series of generations. —Wm. Dietrich.

Bran, milk and pasturage are some of the bulky feeds well adapted to the young pig. They help to distend the digestive organs, which enables the pig to use cheaper and coarser feeds to better advantage than the pig raised on concentrates.

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The cream from the centrifugal machine is of finer quality and a much better product can be made from it. The skimmed milk is sweet and fresh for feeding, and is far superior to that from the gravity system.

There are numerous kinds of mechanical separators on the market, but they differ in detail of construction rather than in the principles on which they work. The dairyman or farmer should thoroughly understand these principles.

In selecting a separator one should first determine its value for good work and then examine its mechanical construction to see it it will stand long usage.

SIZE OF SEPARATOR TO BUY.

The most common size needed depends upon how many cows the dairyman is milking. A 500-pound capacity to the hour is large enough for one having from eight to fifteen cows. It pays to buy a high capacity machine for three reasons.

1. Because every day's run will be shorter and the machine will last longer. For instance, a 300-pound capacity separator will require one and one-half hours to run 450 lbs. of milk through it. A 600-pound capacity machine will do it in just half the time, or three quarters of an hour. The wear and tear on the larger machine being only half as much as the smaller one, it will last twice as long.

BUY LARGE SIZE MACHINERY.

2. You save time and hard labor by getting the larger size. There is very little difference in care in running the two sizes. It is mostly a question of the length of time to run it, whether you turn the crank for three quarters of an hour twice a day or cut the time down to twenty minutes, for this is about the time required in the ordinary farm dairy.

3. You may some day decide to increase the size of your herd, necessitating the trade of your small machine for a large one. This would be expensive.

When I bought my separator, I bought one 450 to 500-pound capacity machine and had only two milch cows and before I got the separator I had hardly enough butter for the house. After I got my separator I sold $2.10 worth of butter at 21 cents a pound so you see the profit right away.

COMMON ERRORS WITH SEPARATORS.

Two errors are made in operating separators. The first is in allowing too much milk to pass through the machine. As there is a limit to the practical speed at which the machine can be safely run, it is not a good practice to try to overcome the error referred to by increasing the speed beyond the safe point.

The feed outlet is usually fixed so that too much milk will not run through, but cases have been known where operators anxious to shorten the time of separating, have enlarged the opening, allowing too much milk to pass. This error is not so common as the second is to allow the speed of the machine to become too slow.

The slow speed does not generate enough force to skim properly and the result is a loss of butter fat in the skim milk. The number of revolutions per minute required by a machine is usually indicated on the machine or in the instruction book belonging to it, and this should be strictly followed.

TEMPERATURE FOR SEPARATING.

All liquids flow more readily when warm than cold. This is not as noticeable with milk as it may be with molasses, but the principle holds just as true and is readily shown in the separation of milk. Everyone has observed that cold cream does not flow as readily as warm cream.

As cream is one of the products of separation and has to flow from the machine through a small opening or outlet, it is seen that the warmer it is the more readily it will flow. For this reason the nearer the temperature of the milk approaches the animal heat the better will be the separation.

While some machines are supposed to skim milk as cold as 65 degrees Fahr., it is not a good practice because the skimming will not be so close. The milk should be at a temperature of 80 degrees or higher.

SUMMARY OF POINTS TO BE OBSERVED.

To summarize the points in the operation of a separator given in their order of importance as bearing on the quality or work, are as follows:

1. The speed of the separator must be uniform and up to the standard required by the makers of that particular machine.

2. The temperature of the milk should be such as will make it flow readily; the warmer it is the more perfect will be the separation.

3. The amount of milk that is run through the machine should remain constant and should not be increased over that which is intended for the machine.

4. The machine should be set on a solid base or foundation so that there will be no jar or shaking about as it is turned, such as would tend to interfere with the even flow of the milk through the bowl and thus destroy its efficiency in skimming.

SEPARATOR MUST BE KEPT CLEAN.

5. The separator must be kept thoroughly and scrupulously clean, particular care being taken that none of the tubes through which the milk flows become obstructed in any way.

6. The test of the cream can be readily changed by changing either the cream outlet or the skim-milk outlet.

In the mechanical operation of a machine none but the best oil should be used, and this should not be allowed to gum or become filled with dirt on the bearings. A good practice is to flush the bearings with kerosene occasionally by making a run with kerosene in the oil cups. This will serve to cut out any gum or dust that has accumulated in the bearings and will make the machine run much more freely and easier, thus greatly increasing the length of

Magnet Cream Separator "Sanitary Strainer"

For STRAINING MILK. Patent No. 123484.

PRICE $1.00 COMPLETE.

Fits the MAGNET Tank or any pail of same size.

All milk strainers have failed to meet the requirements of Dairy Authorities except the cloth strainer, which can be washed clean.

The difficulty of holding the cloth on the top of the pail or tank has prevented the general adoption of the cloth strainer for the cream separator.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT
STEADY AS A ROCK

By a simple spring device (MAGNET PATENT), which circles the top of the tank and holds the cloth in position, this difficulty is overcome and the milk strained directly into the tank.

The advantages are :—

1st. Great convenience in straining the milk.

2nd It retains the animal heat thus enabling more complete separation of butter fat from the milk.

3rd. Prevents dust or foreign matter from falling into the tank.

4th. Nothing to wash except the cloth.

5th. Time and labor saved. Adjust the spring over the cloth, holding it tight around the top of the tank, that is all.

6th. The only "Sanitary" Strainer known.

7th. It is simple, clean and will not wear out.

8th. The same MAGNET quality to the strainer as in the Cream Separator.

9th. Every MAGNET Tank should have one fitted on.

Fill in the coupon with name and address, enclose **one dollar** and strainer will be sent you prepaid Money refunded if you do not find it the handiest article in your dairy.

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C. Fraser McTavish, General Manager

P. S.—Machines rented by the month if desired.

P. S.—A No. 1 position open (to represent us) in unoccupied territory to high-grade men and women.

Could They Be More Foolish?

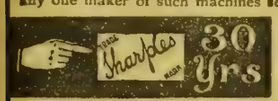
The best proof that common cream separators are out-of-date is the fact that they contain 40 to 60 disks or other contraptions. They need such contraptions simply because they lack skimming force. Since they lack skimming force, they are neither modern nor properly built. In view of these facts, could any maker or agent of common cream separators be more foolish or incorrect than to claim that disks or other contraptions make, or are needed in, a modern machine?

Sharples Dairy Tubular Cream Separators

Dairy Tubular Bowl. Made right. No disks needed.

are entirely different from all others. They produce twice the skimming force of common separators. Dairy Tubulars neither use nor need disks or other contraptions. They skim faster, skim twice as clean, wash many times easier, and wear several times longer than common separators.

The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells.



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THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

time that it will last and do perfect work.

Men Who Know.

Editor Maritime Farmer:—

"I find the keeping of individual cow records very useful indeed, and would not go back again to the guessing method," writes a farmer who has tried both ways.

The men who just guess and who who do not know what each cow in the herd gives during the year, often guess too much on the weight of milk and fat, and too little on the cost of feed. They guess that "Polly" is the best cow in the herd, but they do not know, because they have not weighed or testeh the milk on any system. Probably "Buttercup" is far ahead of "Polly" as a producer.

The men who know the best cows in the herd, those who know which cows produce a large quantity at a low cost are the men who not only get good satisfaction out of keeping good cows, but they are the men who get good money when they sell, because they have records to augment the value. The men who know the poor cows by their records sell them off for beef and save time and labor and feed and stable room and bad language. The men who know enough to select good cows on their records of production are the successful dairymen to-day. The Dairy Division, Ottawa, supplies record forms for milk and feed so that men can soon know what profit each cow pays. The question is not "what does the herd average this month or next, but what does each cow give during the year?" Each cow should be a "long distance" milker.—C.F.W.

Getting Cows in Shape.

Every cow ought to be given a vacation of six to eight weeks before freshening. After she is thoroughly dry her feed should be of the best in quality and sufficient in quantity to enable her to lay on flesh. Here is where most dairymen make their greatest mistakes. They do not consider that a dry cow needs much feed since she has only herself to keep. At no time during the lactation period will it pay better to feed a cow well than while she is dry. The flesh she gains while dry will cost for feed from six to ten cents per pound, depending on the season. After freshening she will milk off this extra flesh in butter fat at from 25 to 30 cents per pound, giving you a profit of from 300 to 500 per cent on the cost of the extra feed it took to put this flesh on her. A mighty good investment, yet how few dairymen feed the dry cow much above a maintenance ration unless she herself gets it from good pasture. In view of this I say feed her very liberally after she is dry. Corn, oats, and bran, equal parts, make a good feed and all these grains are available to nearly every dairyman. During the winter months a few pounds of such a mixture in addition to silage and clover hay, if you have both will put a cow in fine condition. If she is on good grass a little of the above grain mixture will likewise help to put her in most excellent condition.

Two weeks before freshening it might be wise to reduce the amount of corn meal and increase the bran. Say what you will about the cost of bran, it is the safest feed to give a cow about to freshen. At this period attention is necessary every day. Watch the udder develop; see that the cow lacks nothing to make her comfortable and gain in strength so that she can make up a fine udder. In winter the feeding of a little oil meal is almost necessary a few days before freshening. Begin with one-fourth pound per day and increase by one-fourth pound per day up to one or one and a half pounds per day. Things will move along better by so doing, the after-birth will be expelled quickly, and the cow will regain her strength in a short time.

After calving milk little and often one quart from each teat every two hours will keep the cow in better shape than milking her out completely in one operation. I consider milking a cow clean immediately after calving a dangerous practice. It induces milk fever and other udder complications. Give her warm water for a day or so after calving, and a good bran mash as soon as she will take it. Continue this for a few days after. Take the calf away within two days anyway. Watch the udder and begin increasing the feed very gradually if no bad symptoms appear. Don't be in a hurry to get her on full feed; take three weeks in which to do that. Feed a balanced ration. If you are in the race simply for production, make one-half her feed of grain; if for the most profit, give her all the ensilage and clover or alfalfa hay she will eat and enough grain to bring you the greatest percentage of profit.—Experienced Dairyman.

Mrs. Edward H. Marshall, a noted dairy woman of New York, says this:

Here are a few simple rules which extended our market to twice what we can produce, at three cents above the regular market.

Clean up your barn and keep it clean.

Listen to the big dairy teacher.

Keep your score high. It is a letter of credit.

Take the dairy papers and read them. I don't care if your "think machine" is a Solomon, you need the dairy editor to crank it up.

Put your reputation behind your product and let the consumer know it.

Simple rules, but follow them; they pay for farms.

WINDSOR TABLE SALT

Salt goes in or on practically everything we eat—which shows the importance of using only pure, wholesome salt.

Windsor Table Salt is pure salt—all salt—and nothing but salt. It is the standby in all Canadian homes. 35

Your grocer is sure to have it.

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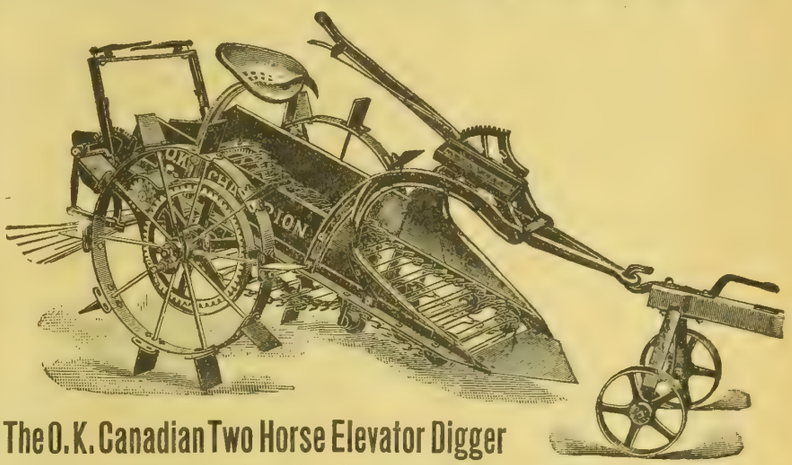

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will dig your crop and do it well. If you are in need of a Digger, you can do no better, than secure one of our machines.

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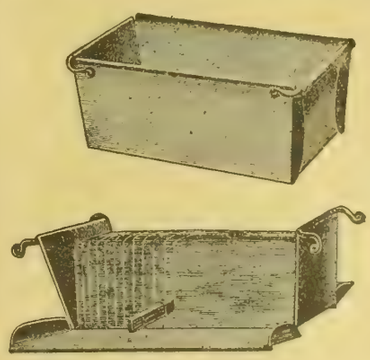

Cannot burn, air chamber underneath. Excellent for loaf cake or pressed meats. Need not remove bread to cool. Simply let down sides of the pan and make clean cut with knife or remove without breaking. Will last a lifetime. Sent postpaid on receipt of **42c** stamps.

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In Great Variety.

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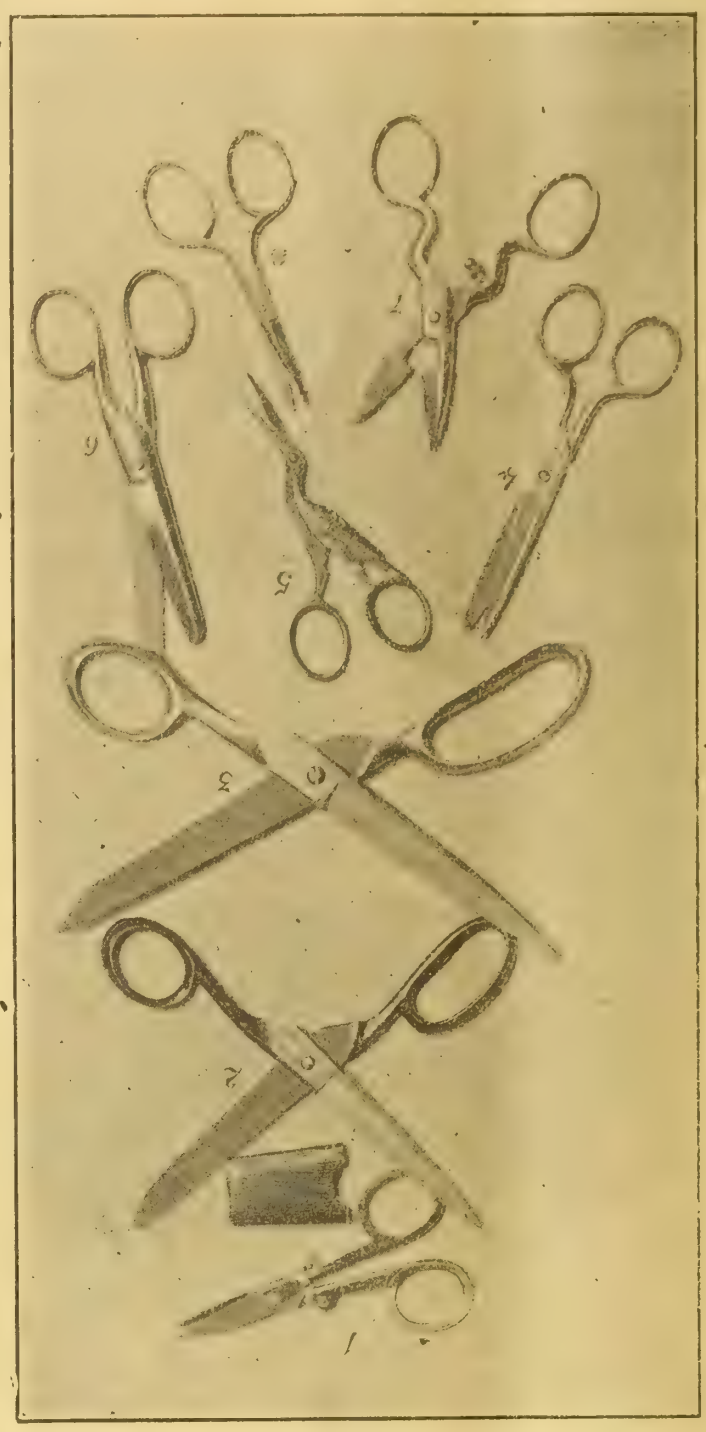

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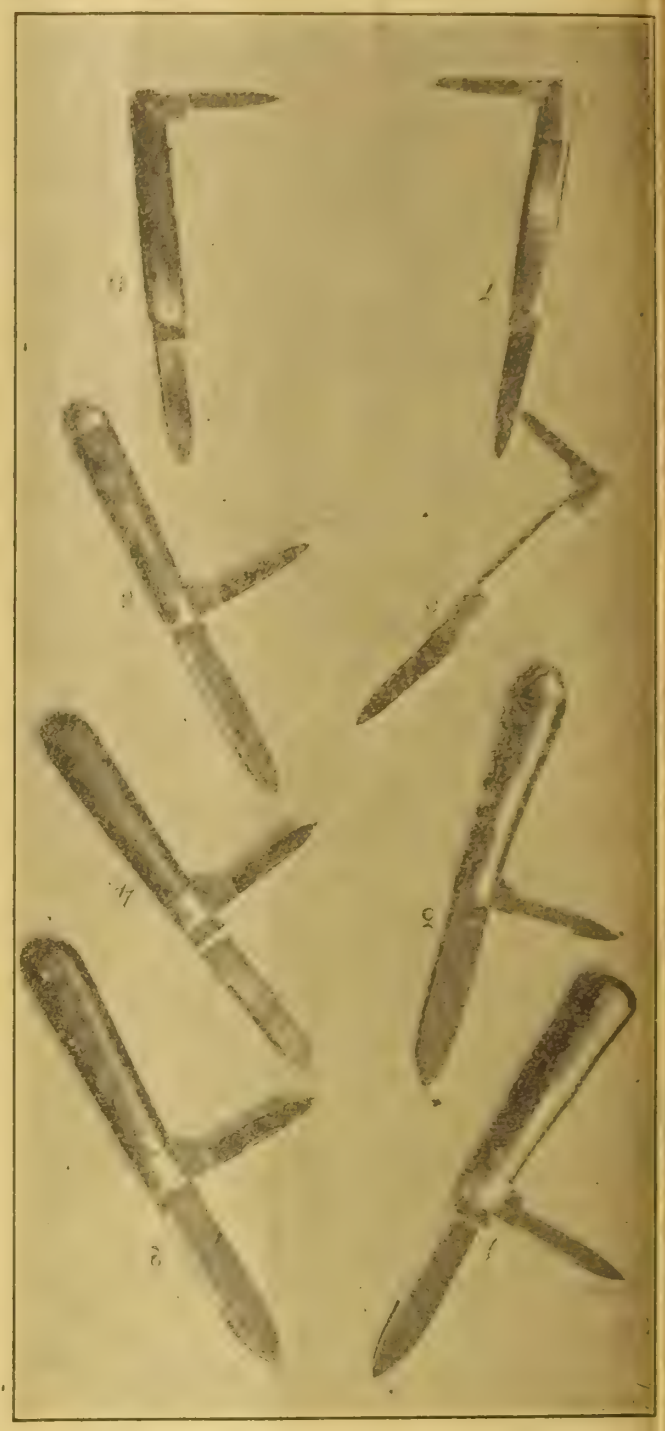

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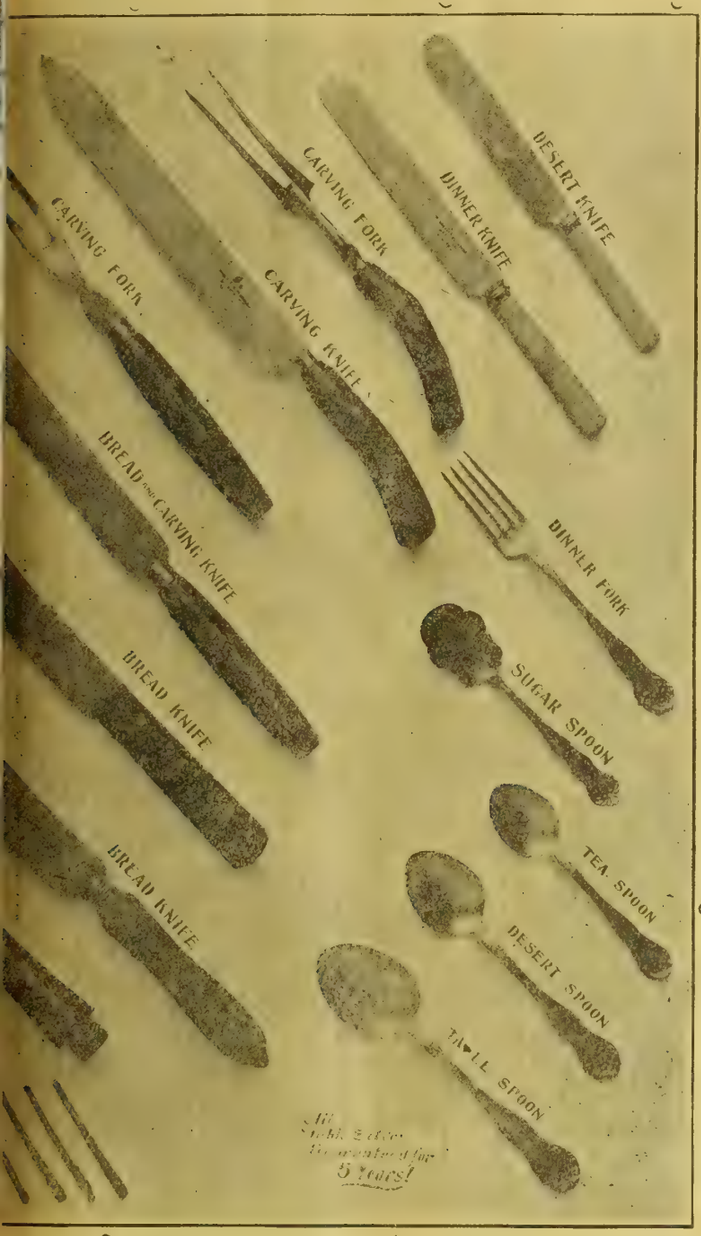

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All patterns and lasts that are stylish.

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This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

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Do You Know

the best silverplate made—the kind that has been *proven* to be best in design, workmanship, finish and wear—bears the trade mark

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You can make no mistake in buying Spoons, Forks, Knives, etc., if they are so stamped.

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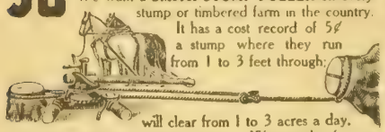

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Growing Apple Trees From Seed.

(Continued from page 671.)

seeds are saved during the winter, they may be stratified, that is, mixed with moist sand in a box with holes in the box for drainage and then placed outside to freeze. The box should be placed on the north side of a building. If the seeds are dry keep them in the moist sand for 24 hours in the house. Before placing outside be sure there is a close cover on the box, otherwise the mice will clean out your seeds even if frozen among the damp sand.

We sow seeds in rows three feet apart and one and a half inches deep and rather thinly, say eight seeds to the foot. On our land we find it necessary to mulch the fall sown seeds in order to guard against heaving out in spring. Where the quantity of seed sown is small, the seeds may be sown in beds four feet wide and as long as required, the beds should be bounded by boards eight to ten inches wide, set on edge. The seeds are then sown in drills ten inches apart. As soon as the plants appear above the ground they will be benefited by being slightly shaded from the sun. This is best done by lath screens; the spaces between the lath may be two inches wide. As soon as the second pair of leaves form, the screen may be removed altogether. If the season is dry it may be necessary to water occasionally. When this is done a thorough soaking should be given. A light sprinkling every day is worse than useless. In the fall the young seedlings are dug up and heeled in outside. In the spring they are planted out in nursery rows, eight inches apart in the row, the rows four feet apart. It is important that some protection be given the young seedlings the first winter, otherwise the rabbits will have them cut down to the ground. Injury by girdling from field mice will also have to be guarded against This is usually done by throwing up a light plow furrow against the trees on both sides of the row, the tops of the tallest ones being bent over and covered with earth. The seedlings are left in the nursery row for two years, then each year they are closely examined when in full leaf, the thorny small leaved ones are cut out and only those with large thick leaves are left to fruit. Those having bearing trees can hasten this by taking scions off the seedliogs and grafting them into the bearing trees. In a couple of years they will usually come into bearing when a fair idea can be formed of the quality and size of the fruit your seedlings are likely to bear.

This is a line of work that needs many to take part in and without doubt the results will be of great value. Every precaution should be taken to plant seeds of the very hardiest obtainable varieties, as hardiness is the first and most important essential on the northern border of apple culture.

Pruning Apple Trees in the Nursery.

Pruning apple trees in the nursery, according to a nurseryman's point of view, requires a considerable amount of skill and study.

A MAN'S BOOK

A PRIVATE TREATISE, WITH CHARTS AND ILLUSTRATIONS, RELATING TO DEBILITY, ITS CAUSE, EFFECT AND HOME CURE.

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Here is a little volume of cheer and helpfulness which all men, young or old, can read with great profit; it contains much valuable information of a private nature, is fully illustrated, and represents the practical knowledge I have gained from forty years of actual experience in giving help to upwards of 100,000 enfeebled, nervous discouraged men. Just a postal card with your name and address, and the book will be forwarded free, sealed, by return mail, and with it, as well, I will enclose a full description of my new 1909 model Electric

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If you need new strength, this wonderful appliance must appeal to you. It generates a pleasant, exhilarating current instantly felt, though it can be made any degree of strength from mild to strong by simply turning the needle of the current regulator; worn nights while you are sleeping, it pours quantities of health-giving, soothing electricity into your sick, weak nerves; you get up mornings feeling bright, strong, full of courage and ambition; it takes all the weakness and pain out of your back; it is a great remedy for your kidneys, bladder, stomach, liver and other vital organs; it cures rheumatism in all parts of the body; it is a courage-giver of the highest order; it brings new strength where weakness exists; it will restore you to vim, vigor and true manhood as sure as night follows day; it makes you feel young and look young; you will live longer for its use; you can throw away all drugs and commence to live as Nature intended you should—a man among men, healthy, happy and vigorous. I can send you thousands of testimonials if you care to see them. Here is a sample Cure :

"Your Health Belt cured me of Nervous Debility, Lost Vigor, Kidney and Bladder Troubles after all else failed.
"CHARLES L. SNELL,
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In all instances I concentrate the full positive current at small of back; it thus enters the system at the nerve and vital centre,

passing thence through the different weakened organs, giving them new life and force. You can get the Belt

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or for cash at a discount, just whichever you wish. Send your address on postal or fill in coupon; or, call at my office, if you live in or near this city. Advice concerning your case will be cheerfully given without charge or obligation.

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Quite a number of young apple orchards planted throughout the country are useless and unsightly through improper pruning in the nursery; each variety of apple making a different growth requires a way of pruning.

If you have had occasion to visit a nursery during pruning time you will have noticed that trees are, as a rule, pruned to one height, and then topped in order to give them a fine appearance in the nursery, regardless of their shape as an orchard tree in time to come. Later, when visiting the orchard, you will have wondered why it is that so many trees are broken down and split from the top. The orchardist will tell you that the damage was caused by wind. He has not the slightest idea that the cause of the top splitting was by improper pruning in the nursery in the first place.

In order to prune intelligently and successfully in the nursery one must make a close study of the habits of each variety of apple in the orchard. The apple requires constant watching from the time it is planted, whether it is piece root, graft or budded. Rubbing the foliage from trunk of graft or bud, as some nurserymen do, in order to make the tree reach a greater height, is a mistake. It leaves a slender, weak tree, with the bark discolored and burnt by the sun. All foliage should be left on young trees, also all limbs that are encroaching upon the leader, in order to produce a good stocky tree.

In pruning trees great care must be taken in pruning off limbs. Use a sharp pruning knife, cutting from the under side of the limb, with the knife cutting to the body of the tree, being careful not to cut in the shoulder of the limb. If you watch the lower end of the limb connecting with the body of the tree, you will find that each limb has a shoulder. Nurserymen will quite readily understand this term. If the shoulder is cut into it leaves a cavity in the tree which takes years to heal over, making a hiding-place for Aphis and other pests to breed in. If the limb is cut off at the shoulder it will callous in a short time, leaving a perfectly smooth tree. All limbs possible should be left on the young tree—if they are not directly retarding the growth of the leader—until the tree is fit for market, and then pruned as above stated. There will be fewer trees put on the bush pile and fewer unshapely trees in your orchards. The orchardist should have an opportunity of training the tree to suit himself.

Potash Uses up Lime.

When potash salts are applied to a soil the potash enters into combination with the soil-lime, and is converted into a form in which it is available for the crop, but it is also a form in which a portion of both the potash and the lime is apt to be lost in the drains. Hence it has been said that potash uses up lime, and lime uses up potash.

It is for this reason that farmers who are in the habit of applying potash salts in liberal quantities to their crops, such as regular growers of potatoes and mangolds, should be careful every few years to give a dressing of lime, otherwise the crop may suffer from a deficiency of this constituent.

In addition to being a necessary plant food, lime also exercises an important ameliorating influence on the physical condition of the soil. It warms the soil, breaks up stiff clay soil, and helps to bind light open soils. It neutralises the action of acidity of soils, and helps the disintegration of organic substances. Lime, judicially employed, is one of the most useful friends of the farmer.

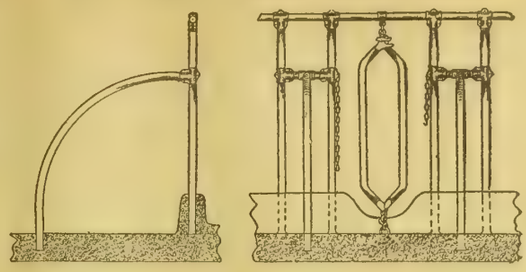
We shall exhibit our Perfect Barn Equipments at the Exhibitions at St. John, N. B., Halifax, N. S., and Charlottetown, P. E. I. Call and see us.

All steel pipe and malleable castings.
No rough edges.
No threaded joints.
No place to hold germs.

Litter Carriers.

Will hoist any height.
Will run round any curve.
Will work in any stable.

Cow Stalls and Stanchions.



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The strongest,
cleanest,
most sanitary
Stall made.

Hay Tools.

For forks or slings.
To run on steel or wood track.
Stacking outfits for fields.
13 different Hay Cars.

Massey-Harris Manure Spreader.

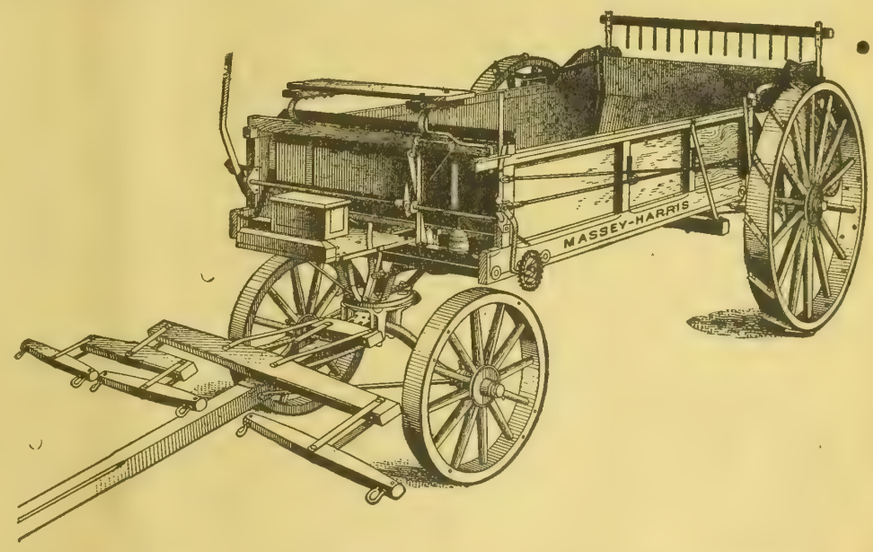
Built very strong because it must carry heavy loads over ground that is often rough and frozen.

Has a spiral beater which spreads the manure evenly.

It is simple and easy to operate so your boy can use it as well as you.

It is durable and will last a long time.

It is one of the most profitable **investments** you can make—not an expense.



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Used in Canada for over half a century —used in every corner of the world where people suffer from Constipation and its resulting troubles—

Dr. Morse's Indian Root Pills,

stand higher in public estimation than any others, and their ever-increasing sales prove their merit. Physicians prescribe them.

25c. a box.

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A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painfull or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Welancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. Wy book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box m 309, Windsor, Ont.

I was Cured of painful Goitre by MINARD'S LINIMENT.

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LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble can be stopped with

ABSORBINE

Full directions in pamphlet with each bottle. $2.00 a bottle at dealers or delivered. Horse Book 9 D free.

ABSORBINE, JR., for mankind, $1 a bottle, removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores, Allays Pain.

W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.

LYMANS Ltd., Montreal, Canadian Agents.

THE HORSE.

Un-nerving.

Un-nerving the navicular subject does not cure the disease; on the contrary, the destructive changes, in the majority of cases at least, still goes on, but it destroys sensation in the foot, takes away all pain and consequent lameness, and renders the horse useful for a period depending on the care and skill exercised in selecting suitable cases, the attention paid to the feet, and the excellence of the shoeing, with, perhaps, something in the way of "luck" as to the escaping from stabs, pricks, and bruising of the foot that will sometimes happen despite the exercise of the greatest care.

Neurotomy on its first introduction has a great vogue, but its injudicious employment and the want of judgment in selecting cases soon brought it into disrepute, and it became neglected in those cases in which resort to it would have been a great boom to both horse and owner. Strong, well-formed, open feet that are free from corns should be the characteristic of subjects selected for unnerving those that are thin, weak in the heels, and full in the sole should be rejected.

The operation is very simple, and presents few difficulties if performed under chloroform, but it is practised mainly by experts, and some veterinary surgeons make it a specialty, and operate for the profession. It consists of removing a portion —about an inch—of the nerve supplying the foot with sensation. The horse has to be cast, the limb to be operated on removed from the hobbles, the hair closely clipped from over the part, the surface asepticised, and a transverse incision made through the skin just above the fetlock joint, the trunk of the plantar nerve searched for, picked up, freed from connective tissue, cut through, and about an inch removed from the side most remote from the nerve centre. The object of this is to avoid the infliction of further pain, which would result from making a second cut through the superior end of the nerve.

A bloodless operation is secured by putting a tourniquet around the arm before the operation is commenced, and quietness on the part of the patient by the employment of chloroform, in addition to which there is, of course, to be considered the absence of pain to the animal. These are no mean advantages when such a delicate structure as a small nerve trunk has to be found and distinguished from the artery running close alongside it. After one side is finished and the edges of the wound secured with a pin suture, the horse has to be turned and the operation repeated on the other, or when both feet are diseased it is usual to operate on the under leg, removing the inner nerve, and then on the outer side of the upper limb, the reverse sides being operated on when the animal is turned.

There are two forms of operation the high and low; but the latter is now rarely resorted to, because not neaely so successful. In the "low" operation only the posterior branch of the nerve is divided, leaving the foot with some feeling, but this often leaves some lameness as well. The "high" operation, dividing the nerve trunk above its bifurcation, is the most reliable, because all sensation is then removed from the foot, and there is no lameness, because no pain. Unnerving has some drawbacks or unfavorable results, even in well-selected cases, but when the horse is incurably lame, and, therefore, useless for work, it becomes a question of this kind: We have an animal that is only worth knacker's price, because to work it would be cruel, and apart from the cruelty there would be a risk of prosecution for working the horse in an unfit state. If we unnerve it, and it only lasts six months, its labor will pay for the cost of operation. But instead of lasting six months it may, with judicious management and a little "luck," last as many years, or until the horse meets its end from some other cause, so that instead of being sold and resold, going from bad to worse, not only as regards the disease, but with respect to ownership, the animal is usefully performing the usual work of its class.

The success of neurotomy is immediate since the horse gets up free from lameness, but about three weeks' rest is necessary for the wounds to heal properly, and during this time there is a great improvement in the action. Being no longer in pain the horse steps out and the muscles of the arm and shoulder, which in advanced cases become wasted on account of inaction, become again developed. Instead of a tottering cripple scarcely able to put one foot before the other, there is a useful working horse, and one that does not blunder or stumble, as many expect it will. The worst pace of the horse suffering from navicular disease is down hill, but the unnerved animal may be ridden or driven down hill, over hard roads or in the hunting field with perfect security. Sometimes nerve tumors form on the cut end of the trunk and cause lameness, but the removal of a neuroma is not more difficult than division and excision in the primary operation. Pricks in shoeing or other injuries that, when there was feeling in the foot would cause lameness, may pass unnoticed in the unnerved animal. There being no sensation, and, therefore, no pain, suppuration is often extensive and the hoof almost separated from the true foot structures before the mischief is detected. This is one of the drawbacks of the operation, and to minimise this risk the unnerved horse should be very carefully shod, and the feet inspected and well washed out each time the horse comes in from work. It is also an advantage to keep thick felt swabs, dipped in cold water, on the feet at night, to delay as far as possible the advance of disease changes in the structure involved. Other untoward complications are fracture of the navicular bone, disintegration and rupture of the tendon, causing the toe to cock up, and a peculiar gelatinous degeneration of the bursa, tendon, and contigous structures. These are due to disease changes which continue to go on while there is no lameness, but do not occur in every case. They are risks that have to be accepted in the choice between an incurably lame horse, and, by resorting to unnerving, a possibly useful servant.—Mark Lane. Express.

It Works While They Work
If horses go lame, you don't have to lay them off to cure them. Kendall's Spavin Cure works while they work—and cures them while they earn their keep. For Spavin, Curb, Ringbone, Splint, Sprain, Swollen Joints, Lameness
Kendall's Spavin Cure
"Completely Cured Him"
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"Two years ago, I bought a colt that was badly spavined, and completely cured him with only two bottles of your Spavin Cure. Worked him steady all the time and sold him last winter for a top price."
Howard Brock.
Also famous as the standard family liniment $1. a bottle—6 for $5. Ask your dealer for free copy of our book "A Treatise On The Horse," or write us. 53
DR. B. J. KENDALL CO.
Enosburg Falls, Vt.

Mating Horses.

For the average breeder, the best time to get the mares to foal down is when the genial weather has come or is near at hand, and the supply of food is ample. It may suit the purpose of the breeder for show to get early foals, and there are special circumstances that may justify an individual in arranging for foals to be produced at out-of-the-way periods; but in the ordinary work of the farm, there is no better month than May for the birth of foals.

As the period of gestation in the mare is about eleven months, it behoves those who wish their foals to come in May next year to lose no time in sending mares for service. Let us repeat with emphasis the advice so often given; that the owner of the mare should bear in mind that a little extra money given for the use of a good stallion is fully repaid by the superiority of the foal. More particularly is this the case when the choice is between a sound sire and one that is troubled by any of the diseases classed as hereditary. Foals from unsound animals will, in the majority of cases, sooner or later develop the same diseases.

This "sooner or later" makes a lot of difference in the way in which this question is regarded. It is, in one sense, a misfortune that the offspring of unsound horses are not born unsound; if they were, the uneconomical results of such mating would be evident and would appeal very forcibly to the pocket of the breeder. But, in effect, what the foal inherits is a tendency to disease, and before it is developed the breeder has sold him. Thus the evil is unnoticed by the man mainly responsible for causing it.

THE ST. JOHN BUSINESS COLLEGE

OUR 1910-11 CATALOGUE

Now in the Printers' hands, will show an increase in rates, caused by our additional equipment and the greatly increased cost of everything we have to buy.

Those entering before the Catalogue comes from the Printer can claim present rates.

S. KERR, Principal.

Severe Pains In The Liver.

Had Several Doctors.

A COMPLETE CURE EFFECTED BY A FEW VIALS OF

MILBURN'S LAXA-LIVER PILLS

Mr. F. H. Wood, Crystal, Ont., writes: "For several years I was greatly troubled with severe pains in the Liver. I had several doctors attend me but without any success. At last I was advised to try Milburn's Laxa-Liver Pills. and after taking a few vials I was completely cured. It is, now, about six months since I took them, and I have had no return of my trouble since. I can honestly recommend them to every person who is troubled the same as I was."

Milburn's Laxa-Liver Pills are 25c per vial or 5 vials for $1.00, at all dealers or will be mailed direct, on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINIAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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Monday, AUGUST 29th, 1910,
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opens its splendid new rooms for the **FALL TERM.**

We are making preparations for a great big attendance this year.
If you have not already received a catalogue, write for one. Address,
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59 Water Street,
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POULTRY.

Geese on the Farm.

There is no doubt that by good and careful management geese can be made to pay well and bring the farmer a good profit. There is plenty of room for improvement with geese. The specimens for sale in any large market are so varied, both as to size and quality, that there is no doubt with careful breeding (the selection of sound stock birds), and the subsequent fattening of the best methods, a very great improvement could easily be made at very little extra cost, and with much better results.

There are two well known varieties of birds, the Toulouse, grey in color, and the Embden white. Of course, they have been very often crossed, as the numbers of grey and white geese about the country can testify.

Now as to the respective merits of the two breeds. The Toulouse attains a larger size, but the Embden matures more rapidly, and so is ready for the autumn or Michaelmas trade when the Toulouse is not. The Embden lays fewer eggs, but wants to set early; the Toulouse is not a good sitter.

From experience we think a cross of the two breeds is to be recommended—a pure-bred Tolouse gander with pure-bred Embden geese. It is best to have one gander and only two or three geese as stock birds; but they must be mature birds, preferably of the third year, as they produce the strongest goslings.

The geese will begin to lay early in March; their eggs should be removed and placed under good large hens—an Orpington can manage four well.

They need a month to hatch out in, and need little looking after, except that towards hatching time they should be daily sprinkled with a little water, which will help the young birds to get out. For it must be remembered that in a natural state the eggs are very often in damp places, and if under a goose they will daily be wetted by her when she returns from the water and resumes her sitting on them.

If the daily wetting is not carried out, the eggs hatched under a hen will most probably hatch out badly. Goslings are very strong and easy to bring up. They need neither a hen to brood them nor a foster-mother. They can be hatched under a goose; she makes a very good mother. But this fact must be borne in mind; if left to herself she will probably lay from twelve to eighteen eggs only, whereas if they are taken away and put under a hen, she will probably go on laying more than that number.

Perhaps the best plan is to let the first of the eggs be incubated by hens, and the goose have the others. If once she becomes broody she will sit; nothing can move her.

Now as to general management and feeding. The older birds require very little. One essential is a pond or stream. They eat large quantities of grass, and on that account are regarded as nuisances by some farmers. Three or four stock birds at liberty on a farm will only need a feed of oats at night. Young geese will do well on plenty of coarsely ground oats, varied as they get older with some whole oats.

Geese cannot be fattened shut up like poultry. The only way is to give them plenty of good food, leave them at liberty, and let them be kept quiet. Shut up, they would fret, and, of course, never fatten.

Plenty of grit must be provided; they need it for their digestion, and nothing will be lost by keeping it about for them; for even on a good-sized farm they will not always be able to find enough.

For the first fortnight or three weeks of their lives goslings must be kept under restraint and well in the shade, as they are very apt to get sunstroke.

Geese are best killed by a good blow on the back of the head, and this should be followed up at once by bleeding. The bird dead, the feathers should at once be plucked, as they come out then so much more easily.

ECONOMICAL FEEDING.

The subject of economical feeding is one which interests all poultry keepers, but when the question of the cost of food comes in it will be found that the best is always the cheapest when fed to birds which are bred for laying.

When giving grain for the last feed in all cases let it be good and of nutritious quality. When it is wheat it does not matter if it is small so long as it is sound, because the kernel of wheat is nutritious. We mention this fact more particularly for the sake of farmers or those who can get good small wheat cheap.

Wheat and oats are the grains used principally with maize on cold days, and particularly when the birds have a free range over grass. We do not advocate the use of maize indiscriminately.

Where fowls have a good range and get hold of plenty of worms, etc., besides scraps from the house, etc., and commence laying, they can have a supply of maize, and it will not hurt them, but if they are fed on maize liberally during the winter before they begin to lay, they get fat internally.

We do not object to maize being used twice or even three times a week in cold weather, as there is a great deal of heat in it, and that is what poultry keepers should study.

Many poultry-keepers give their fowls food because it is food, not thinking whether it is suitable for the time of year or not. When the weather is frosty or very cold, always try to get some rough fat from the butcher, and mix it in the hot food in the morning.

It is well to boil the grain for a change. This should be placed in a saucepan, or some vessel in cold water, with a little salt in, first covering the grain with water, then place it over the fire, and let it come to the boil; then stand it on one side—that will draw all the water up—and give it hot before they go to roost at night. This should be done twice or three times a week, when it is cold or frosty weather.

On very cold mornings the birds should have warm water given them to drink. After they have had as much as they want to drink, the vessel should be tipped over; it freezes in the trough. Then warm water should be given again in the afternoon.

Broody Hens.

When the hatching is over, the care of the broody hens becomes a vexing question for the balance of the season, especially where the American or Asiastic breeds, that are prone to broodiness are kept.

It is not difficult to arrange things so one's temper may not "fly" too often.

The handiest way to care for them that I have found is a cage built of poultry netting. It is perhaps five feet long, three and a half feet wide and two feet high, with a cover hinged on top which can be lifted when you drop the broodies in, and lifted up and tipped back when you want to let them out. They soon learn to fly out themselves.

The floor where this sets should be swept clean so they can get no nesting material. A dish of water can be set just outside the netting and they will put their heads through to drink, but cannot upset the dish. The wire netting offers a chance to throw grain through when you are feeding the main flock, without trouble or loss of time.

The way to break up" hens quickly is never allow them to stay on the nest over night. I go each night and put all that are on the nests into the wire cage. The next night I let them all out and any that go back are again put in, as well as any new ones. This makes a continuous performance, but requires little time.

If you want them to get back to laying quickly you cannot adopt the old method of letting them set a week, then tying a tin can or something else to them, or standing them in a tub of water to scare their wits out of them.

Give them a good coop, food and water, and they will reward you by getting back to laying in a few days. This treatment is better and better for the man for it saves his temper and increases the egg yield.

If we keep hens that are prone to sit, we might as well accept the "broody part" and treat them well, for the trait is sure to "crop out" sooner or later.

The warmest friends of Red Rose Tea are those who have tried some other brand said to be "as good as Red Rose" and for which they paid the same price. Very easy to say a thing is "as good" but not so easy to "make good." 66

Prices: 30c., 35c., 40c., 50c. and 60c.

HAD LAME BACK

Was Almost Unable To Move.

Two Boxes of Doan's Kidney Pills Cured Her.

Mrs. M. B. Cairns, Upham, N.B., writes: "I feel it my duty to drop you a few lines to let you know what Doan's Kidney Pills did for me. I had such a Lame Back that I was almost unable to move, and my kidneys were in an awful condition.

"After taking two boxes of Doan's Pills I was completely cured and feel as well as I ever did."

Doan's Kidney Pills are a specific for all Kidney Troubles. They begin by expelling all the poisonous matter from the kidneys, and then heal the delicate membranes and make their action regular and natural.

Doan's Kidney Pills are entirely vegetable, and may be safely taken by young and old.

Price 50c per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct, specify "Doan's."

Telegraphy

with a thorough knowledge of Station Agent's work, as taught in the Central Telegraph School, Toronto, and with the influence of a well established reputation, like ours, is the surest passport into a good salaried situation, leading to a successful future. Free catalogue explains. Write for it. Address :

T. J. JOHNSTON, Principal,
2 Gerrard St., East Toronto.

When the digestion is all right, the action of the bowels regular, there is a natural craving and relish for food. When this is lacking you may know that you need a dose of Chamberlain's Stomach and Liver Tablets. They strengthen the digestive organs, improve the appetite and regulate the bowls. Sold by all dealers.

Evaporated Apples.

The Canadian Trade Commissioner at London, Eng., reports to the Department of Trade and Commerce, Ottawa, that although the United States remains principal source of supply for evaporated apples imported into the United Kingdom, Canada is obtaining a larger share of the trade than in the past, and with a little more enterprise should be able to develop the business considerably. A London firm which have been handling Canadian evaporated apples for the last few years, stated recently that they could dispose of much larger quantities if they could arrange for additional sources of supply. As their views should be of interest to Canadian producers and shippers, their ideas have been embodied in a letter, which is herewith reproduced:—

"We last season imported 3,220 boxes, and while the quality was on the whole fair, there were some exceptions which did not come up to the average, and of which we had to make claims on the shippers. Even the best of the shipments we received did not come up to the quality of the previous season, but we understand this is not due to any fault of the packers, but to the inferiority in quality of the fresh apples. With regard to prices, these opened high and held until shortly after Christmas, when the market began to fall away and it has continued on the down grade ever since. Late advices from Canada are to the effect that the market there has taken a turn, and that prices are much firmer, but this change has not been reflected on this side, and what apples are on the spot are being pressed for sale at low figures. With regard to the coming season, business has already been done, several transactions having taken place in prime quality rings on offers received from United States packers. The business opened at 33s. per cwt., then gradually dropped to 31s.

"If prices touch somewhere about 285 per cent. a large trade ought to be done in the coming season, as when the prices are low the consumption of evaporated apples is much heavier than when the cost is high. 'We understand from New York advices that certain portions of the United States apple crop are in splendid condition, whereas other districts are reported to have been adversely affected by the severe weather they had some time back. Judging from the prices the United States are quoting, the indications are that their crop is expected to be a fairly good one. So far we have no prices for new season's Canadian rings, but they would be readily saleable to-day at the same price and terms as United States packs if we were able to offer them. It is a disadvantage not to have prices for the new season's Canadian rings, as early as the United States, because a considerable amount of the business is transacted on a forward basis, and when prices for Canadian rings are only available when the pack is actually dealt with, a very considerable portion of the season's business has already been affected.'

"Although the consumption of dried and evaporated apples and other fruits is proportionately much larger in some of the continental countries—more notably Holland and Germany—than in the United fflingdom, there is a considerable consumption in this market. Apparently there are plenty of importing firms who are ready to negotiate with Canadian producers who can offer high class goods and can be relied upon to make regular shipments."

Banding Apple Trees.

In apple sections infested with the codling moth, the time has come to supplement spraying. No matter how thoroughly the spraying may be done there are always some moths left.

In addition to spraying, we have used bands for many years with excellent results. Our experience indicates that burlap sacking, of which bran sacks are made, is the only material fit to use, because the worms will not enter bands made of dyed cloths. We aim to make the bands long enough to go around the trunk of the tree. They are placed anywhere from three to four feet above the ground, so that any hogs running in the orchard are unable to reach and destroy them. The bands should be made from eight to ten inches in width, and folded once so as to have a double thickness. When placed on the tree they should be stretched reasonably tight so that they will not sag with rain. One nail is sufficient for each band.

The larvae go into and under the bands and sometimes transform into the adult moth in less than a week, according to the weather conditions. Thus, the bands should be examined at least once a week. To do this we find that the handiest tools to use are a light house hammer or a pair of pinchers.

When removing the band, take one end in the left hand and strip it

FARMERS OF THE EAST

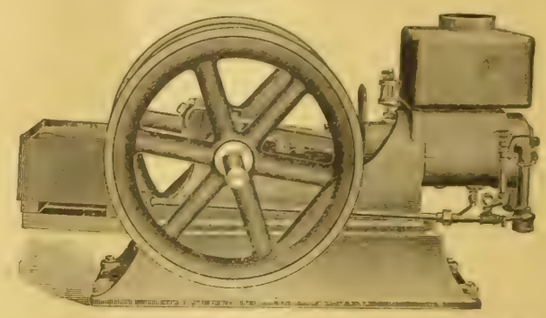
should take out an agency for the easiest selling Gasoline Engine on the market to-day. We refer to the

"WATERLOO BOY"

FROST PROOF STATIONARY ENGINE

The most complete and up-to-date Gasoline Engine on the market to-day.

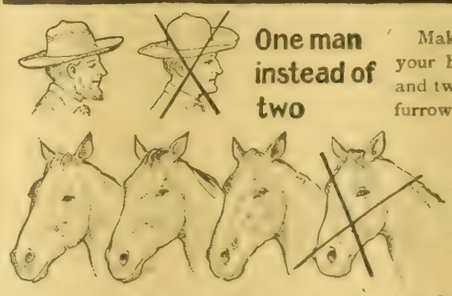
Write at once for full particulars. We will give you every assistance in making a sale. Don't delay, the territory you want might be taken if you wait until to-morrow.



I am a "Waterloo Boy" but can do the work of several horses.

J. D. FRIER, - Sussex, N. B.

What the "Crown" Gang Plow does



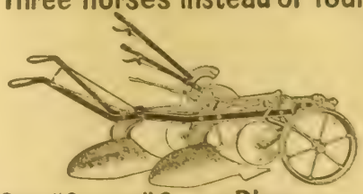
One man instead of two

Make this test: The first day give your hired man a single-furrow plow and two horses. Take another single-furrow plow and two horses yourself. Then, do one day's plowing. Together, you will plow three acres, under favorable conditions.

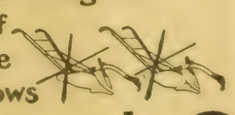
Next day, use the "Crown" Gang plow and three horses. You'll find that you can still plow three acres.

Three horses instead of four

The second day the same work has been done with one man instead of two, three horses instead of four, one "Crown" Gang instead of two single-furrow plows. What this saving means to you in dollars and cents you can figure out for yourself. But it is enough to pay for the "Crown" Gang in a few weeks.



One "Crown" Gang Plow instead of two single furrow Plows



The "Crown" Gang stays right down to its work. It turns the furrows more evenly than a single-furrow plow. The easy-working levers are conveniently located. The wheels have dust-proof boxes with roller-bearings. You should learn more about the "Crown" Gang right away, and about our special orchard gang plows, too. So write for CATALOGUE

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Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 15th, 1910.

Charlottetown Exhibition, September 19th to 23th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Full course at the Nova Scotia Agricultural College, Truro, N. S., begins November 1st, 1910.

Short courses at the Nova Scotia Agricultural College begins January 3rd, 1911.

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If you have Live Stock for sale advertise in the Maritime Farmer.

from the tree carefully, otherwise some of the worms will drop to the ground and escape. Before replacing it, the band should be thoroughly examined, inside and out, so that every worm is detected and crushed.

By working systematically, a man can do about 200 trees a day quite easily.

The bands placed on the trees during late spring and early summer, should be examined for the first time not later than the middle of July, and not taken off the trees for the winter before the apple crop is harvested.

Banding apple trees is a profitable work. With spraying combined, we have frequently reduced the wormy apples to ten per cent. Another advantage to be derived, and one which is very liable to be overlooked by the grower, is the encouragement into his orchard of beneficial insects. Very often we have found while examining the bands, numbers of larvae of the ladybug beetles, ichneumon and brachonid flies, feeding on the codling worms.— G. S. Pert, Burlington, Ont., in Canadian Horticulturist.

The Strawberry Bed.

Some growers prefer to fruit strawberries only one year, but where the beds are reasonably free from weeds and the plants are in good condition it is customary and quite satisfactory to fruit the plants two or even three years in succession. Where this is to be done the foliage should be mowed as soon as the fruit is picked, usually early in July. A scythe, or if the beds are quite large an ordinary grass mower, will do the work if run quite close over the beds. This material should be either raked or burned off the plants. In a small bed it is safer to rake and burn at the side of the bed than to attempt burning it on the patch. If the field is to be burned, the grass must be thoroughly dry, so that a fire will pass over it very quietly. If it is wet and the fire does not burn rapidly, the plants are often seriously injured. This method helps to keep in check insects and some of the diseases attacking strawberries.

A soon as the beds are cleaned, the old plants should be thinned out to about six inches apart, leaving the rows not over a foot wide. Thorough cultivation should be given them the rest of the season. If the land is not very rich, it is a good plan to open a trench along the rows several inches deep, and fill with thoroughly rotted manure, covering this with soil again. One of the easiest ways to remove he old plants is to plow a furrow on either side of the row, leaving a row about 12 inches wide. Then pick all old or diseased plants from this row, leaving young, vigorous plants about six inches apart.

The soil may be cultivated back into the row, and any weed or plants between the rows should be thoroughly worked out. Thorough cultivation and care should be given the plants from now on, the same as should be given new plants set in the spring. If this is done very often, the second crop will be as good as the first.

When a diseased tree is found and the disease cannot easily be arrested, it should be removed from the orchard and destroyed. It is better to reset one tree than the entire orchard.

Do not leave lettuce, mustard and turnips in the garden after they are too old to use. They attract insects and furnish a breeding place. You will greatly reduce the number of insects next year if you destroy these old plants.

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AND REALLY COSTS NOTHING

You can easily afford this handsome, practical kitchen necessity. For our special offer (please send for details of it) lets you pay for it out of what it actually saves in lessened grocery bills. You should ask us about it at once.

Whole Table-Top one heavy sheet of

BRIGHT ALUMINUM

You cannot begin to know the CHATHAM by this picture, for the picture cannot show even one of its most pleasing and valuable features—the SOLID SHEET OF BRIGHTLY-POLISHED HEAVY ALUMINUM that forms the covering of the table-top and extension leaves. This ALUMINUM is extra-heavy weight, pure metal—LOOKS LIKE SILVER—LASTS LIKE STEEL—cannot rust—won't gather dust or dirt—easily cleaned—simply perfection ! And this is the ONLY kitchen cabinet you can buy with an aluminum top--which ADDS FULLY FIVE DOLLARS TO ITS VALUE. Yet you pay NOTHING EXTRA for it !

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You must see the Chatham Kitchen Cabinet to appreciate how handy, compact, sensible it is. Exterior of specially-selected black ash, hard as rock and beautifully polished. Panels of golden chestnut. Bakeboard, drawers and flour-bin of snow-white basswood.

With the CHATHAM everything you use in cooking is at your fingertips. You can get meals ready sitting down. Your flour-bin (metal lined—holds 75 pounds !) is right under your hand in easy reach. Sugar bin (opened or closed by a touch) is just in front of you. Six air-tight canisters (free with every Chatham Cabinet) stand in the shelf-rack. Big, dust-tight drawers hold spoons, egg-beater, funnels, strainers, etc. ample closets for kettles, pans and the like.

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We use one of my Cabinets in my own home; and the women-folk say frankly that they simply could not get on without it. It certainly does cut kitchen-work square in half. And I know we build it so well it can safely be GUARANTEED to you.

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Makers of the famous Chatham Fanning Mill

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THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

The Old Brook Farm.

(By Virginia F. Townsend.)

She sat in the south room before her small spinning-wheel, for the time of which I write was in the opening of the nineteenth century, and the aesthetic element occupied a comparatively inconspicuous position in the education of the daughters of Puritan men and women. Pianos had not supplanted the accomplishment of pudding-making, and crinoline did not stand in the way of cheese-pressing or churning. It was a large cool room, and its two side windows looked out on a pleasant reach of pasture land, and beyond this a grove of pines, rocking to and fro to the slow soft music of the winds; and still beyond these to the sea, stretching away and joining the horizon, blue and bright and tranquil as though no tempest had ever walked over its face in darkness, and anguish, and wrath. You would hear from those south windows the soft playful plash of the waves on the sands, which mingled pleasantly with the sluggish wind in the pines, and the robin's song in the great, rambling old apple-tree, whose every bough was fluted and spangled with blossoms; for it was in the last days of May—the earth had put on her garments of praise.

So Charity Ames sat there with the sweet spring winds and the pleasant sunshine slipping through the south windows, with snatches of low psalm tunes fluttering out of her lips, and faltering back and forth in the air, a picture to gladden the eyes of any man, in her dress of homespun plaid with the small white ruffle running about her neck; and her sleeves tucked up a little above the wrists, with just the daintiest intimation of her round plump arms.

She was not beautiful, Charity Ames, but she was a little, dainty, girl-woman, with soft full outlines, and cheeks where roses forever were going in and out, and blue eyes with a dimple of sunshine in them.

She was the daughter of a New England farmer; a man whose sole earthly possession was his little yellow-brown cottage, and the few acres of land around it. His health had been broken many years before in the wars, for he had served in almost every important engagement. He was a staunch patriot; a deacon in the "stone meeting-house;" an honest, conscientious, God-serving man. Of his family only three remained—Charity and her young brothers; for his wife and his four children, he humbly trusted, were in heaven.

Charity was the light of her father's eyes; she was like a spring bird in that little brown home nest; always full of smiles and snatches of song, and pretty, graceful household ways; for the whole domestic charge had fallen on her since her mother's death, six years before. Charity was twenty-two. Of course she had not blossomed into all these years without having her share of admirers; and at singing-schools, and quiltings, and apple bees that bright, sweet, vivid face flashed in and out among the rustic beaux and maidens; but the fragrance and beauty of its life were still kept to gladden the old yellow-brown house on the Woodford turnpike.

But that afternoon, while the snatches of old church airs and the drone of the spinning-wheel were woven into each other like a bright woof and a gray warp, there went on in the breast of Charity Ames a good deal of serious dubitation, somewhat after this fashion:—

"It isn't an offer to be snuffed at, now. And to think I might really be Squire Hemingway's lady, and live in the great white house on the hill, with all those elegant carpets and mahogany furniture! Then I'd have a carriage to ride in and be so grand. And, what is more than all the rest, father is growing old, and giving out all the time, and I could be such a comfort and help to him. And send Joseph to school, for that boy was cut out for a parson or a lawyer, or somethin' more'n common folks; and I'd contrive some way to pay up the mortgage on the land without hurtin' father's feelin's, and set his mind at ease, now he's fallin' into his seventies. The Squire's almost fifty, it's true, but he's a handsome man, though his hair's got a good deal gray; and he has a little pompous way, but I s'pose it's natural. Mrs. Squire Hemingway! That sounds well. And how everybody would open their eyes; but dear me!"

Something strong, and stout, and deep lay beyond that "dear me!" for it crept out of the girl's lips with a deep sigh, and the roses hurried into her cheeks, and a sudden impetus seized the wheel, and the small feet did double duty on the treadle.

Just at that moment the small brown wicket opened, and a pair of feet came softly through the thick grass, and round by the side of the house; so softly that Charity Ames did not hear them, until she looked up suddenly and saw a somewhat slender figure, and a fine, honest, sun-bronzed face standing in the door.

"Good afternoon, Miss Charity." The tones were clear, brave, pleasant; somehow they suited the face.

The girl's head brindled a little. She had one of those heads that are never still, that are always restlessly swaying and fluttering about like leaves in sleepy winds.

"Good afternoon; won't you walk in, Mr. Taylor?" The voice was soft and steady enough, and so was Charity's face, for she was much engrossed just then in tying a "head" of flax to the distaff, with fingers not quite so steady as the voice and face.

"Thank you; I can't stay to sit down," answered the young man, as he crossed the door; "but Miss Parsons wanted me to stop in, on my way to the mill, and see if you'd have her cheese ready this week."

"O yes! I shall take it out of the press to-morrow."

The errand was accomplished, but somehow the young man lingered; and finally walked to the window a little awkwardly, and broke one of the lilac boughs from the trees, though the small pink blossoms had scarcely begun to tuft it.

"What a pleasant view you have from this south window," continued the visitor, looking out of the grove of pines, and off to the sea.

"Yes; I always bring my spinning here in the pleasant days."

This time the girl looked up and smiled, a smile that would have done the heart of any man good, but that did more than this to Reuben Taylor, who would have laid down his life for Charity Ames.

He drew a little nearer the girl. "The singin'-school's goin. to have a sail down to Rocky Beach, as soon as the moon gets large enough, which will happen by the last of next week; I should like to engage your company, if its agreeable."

The speaker caught his breath a little at these last words; but he got bravely through them, after all.

The spinning-wheel suddenly paused in its revolutions. Charity tapped the board meditatively with her foot. "I am much obliged to you, Mr. Taylor, and if I can be spared

She looked so sweet, gazing out with a lady-like self-possession at the distant sea, as composed as the sun on the carpet, though there were quick swellings and ebbings in the heart under that plaid dress, she looked so sweet that the bashful soul of Reuben Taylor was stirred within him, and before he knew it he had laid his hand on her shoulder, and broken out into an entreaty. "Oh come now, Charity; do say you'll go!" The words were not much, but the tones were.

The roses hurried into the girl's cheeks now, and she made a half coquettish movement backward; but the answer came pretty readily—"Well, I'll go if I can, Mr. Taylor."

The young man's deep brown eyes flashed with pleasure. "Thank you Charity. Truly I wish you'd call me Reuben, as you used to when we went to the old red school-house on the green."

"Well, we've grown older since then, you know"—making tactile investigations of her flax.

"Yes, I know; but somehow you'll never seem anything to me but little Charity Ames."

There was no mistaking the quiver in the voice now, no mistaking the blush in Charity's face either; but it fell back in a moment, and an arch light supplanted it, leaping up from her lips into her eyes, and she looked up with that little jingling laugh of hers. "And you will never seem to me anything but just the provoking, tormenting little rascal you used to be, Reuben Taylor!"

The young man laughed heartily at this very uncertain compliment; and after chatting a few moments more in the same strain, he put on his straw hat, bade Charity "Good afternoon," and got as far as the door, when he turned quickly back with a face struck into sudden seriousness. "Charity, it is not true that you are goin' to marry Squire Hemingway, as the neighbors say?"

Poor Charity! the hot flushes came and went in her cheeks. She opened her lips to speak, but something rose up in her throat, and beat the words back, and at last she broke down in a sob. "I shouldn't think you'd come here to insult me, Reuben Taylor!"

The young farmer was distressed beyond measure, especially as Charity buried her face in her little brown, dimpled hands, and continued to sob as though her feelings were aggrieved beyond measure. Reuben leaned over the girl, and laid his hand on the smooth, shining brown hair.

"Charity, won't you forgive me for asking that question? You know why I did it."

"No, I don't, I'm sure"—sobbing and keeping her face in her hands.

"Look up, then, and see." There was something in the tones that would be likely to secure compliance.

Charity Ames did lift up her flushed, tear-stained face, and Reuben took her hands in his, and said looking straight into her eyes, but with the muscles working about his mouth; "I asked you, Charity Ames, because I loved you better than my own life, and because my happiness for all time was bound up in your answer."

There was a mixture of tenderness and manly dignity in the young fellow's manner at this moment which no person could have been insensible to; his face was very pale with the struggle it cost his brave heart to make this confession, but every feature was struck through with a light that made it beautiful. Charity's eyes did not drop until he concluded; there was something in that face which magnetized her gaze to it.

"O Reuben!"—the voice and the gaze fell together, but there was that in both which Reuben Taylor understood.

He bent down by her, for she was crying now, but very softly. "I never meant to tell you this, Charity—though I've carried the knowledge in my heart for half a dozen years—until I had a home to offer you which should be worthy of you. But the truth has got out now, and there's no taking it back. It seems wrong to ask you to wait so long, but you know how it is—there's mother and Amy that I've got to look out for, and it's slow work pullin' up hill; but the thought that you'll make my heart brave and my hands strong, and, please God, I'll have a nest warmly lined for my sing-in' bird yet. Will you wait, Charity, little Charity?"

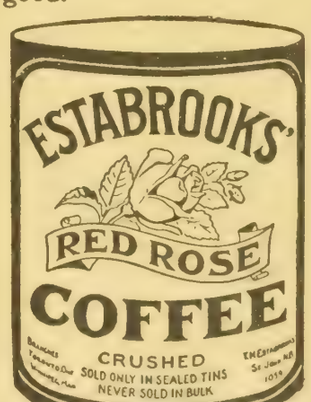
There was such tenderness flickering in and out of her name—it had never sounded half so sweet to her before; and the woman's heart leaped out, and engulfed in one mighty wave all the girl's timidity, and coquetry, and pride.

"Yes, Reuben, I will wait for you with a heart as brave and as patient as yours, no matter how long the time is."

You should have seen her face then; it looked to Reuben like the face of an angel, with the tears held in check in the blue eyes, and the light sifting through them as it sifts through vapors at sunrise. So they sat together in their first dream of love, and talked hopeful

The flavor of

Estabrooks' Coffee is always the same, because its quality never varies. If you picked one tin out of a hundred the coffee inside would be the same as in the other ninety-nine—rich, fragrant, temptingly good.



Sold only in 1 and ½ lb. tins.

Try it for breakfast to-morrow

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On receipt of price we will deliver any goods in this advertisement,

Charges Paid

to your nearest Freight or Express Office anywhere in the Maritime Provinces. Order to-day. To-morrow is the mother of regret.

Dinner and Dessert Knives

The cutlery we sell is made in Sheffield, England, by the best manufacturers and there is nothing better on the market.

No. 011H.—Best grained celluloid handles; best quality steel blades, round or square handles.
Dinner Size, per dozen.....$3.50
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No. 0I4E—White celluloid handles; good quality steel blades. In round handle only.
Dinner Size, per dozen.....$2.50
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No. 809X—White celluloid handles; blades good quality Sheffield steel. In round handle only.
Dinner Size, per dozen.....$2.25
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In Pairs.

No. 221R—Rodger's, real stag handles, curved blade of best steel; patent guard on fork. No springs to get out of order.
With 8 inch blade.....$1.75
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Put up in cardboard box.

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With square handles, round end. Per pair.....$1.50
With round handles. Per pair.... 1.25
In cardboard box.

Three Piece Sets.

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McAVITY'S SPECIAL.

If you lather well, this razor will shave well. 5-8 or 3-4 inch blade, round point, ready for use and warranted.
Black Handle.....$1.25
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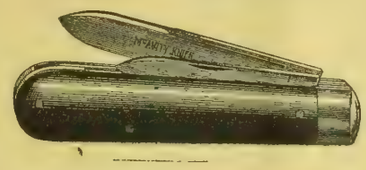

The McAVITY KNIFE, two blades, Buffalo horn handle, brass lined.
No. 68X—2 3-4 inch.....35c
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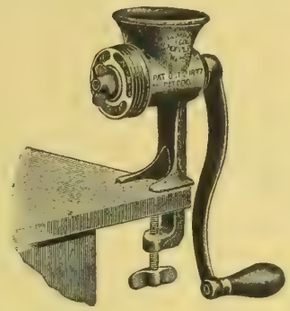

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Food Choppers are such a necessity that it is not economy to be without one. Their use means such a saving of food.

No.	51	52
Each	$1.25	$1.50

Bread Makers

Mixes and kneads dough thoroughly in three minutes; perfectly sanitary in every respect; hands do not touch the dough; very simple in construction and a child can operate it.
4 loaf size.....$2.25
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"Eclipse" Semi-Rotary Lift and Force Pump

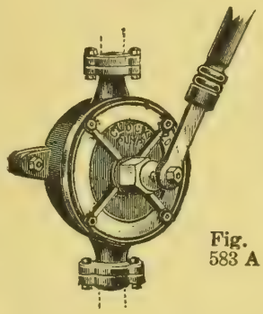

Fig. 583 A

Just the pump to bring water from a well or spring to your house.

No.	2	3
Section Pipe	1	1 1-4
Double acting, painted red, each	$4.50,	$5.50
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Wrought Iron Pipe

For conducting water; plain and galvanized; all sizes in stock.

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We know that you will be delighted with its elegance and refinement.

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This is why we will select a

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In buying a cough medicine, don't be afraid to get Chamberlain's Cough Remedy. There is no danger from it, and relief is sure to follow. Especially recommended for coughs, colds and whooping cough. Sold by all dealers.

of the future—Reuben Taylor and Charity Ames. And the sort wind rumpled and tossed the apple-blossoms, and sighed and quivered among the pines, and the slow sound of the waves on the beach came in through the south windows which looked out on the sea.

At last there was a little click of the back gate latch, and Charity gathered away her hands quickly from Reuben's, and the color deepened in her cheeks.

"O Reuben! that's Joe comin' from school."

And this remark aroused the young farmer to the consciousness that it wanted but two hours of sundown, and the mill was three miles off, and if he got the two bags of corn ground that day which were now lying at the bottom of the old farm cart it wouldn't do to let "the grass grow under his horses' feet."

Charity stood at the window and watched her lover as he went down to the gate, and O how small to the heart of the true, loving woman looked Squire Hemingway's great house on the hill, with its handsome carpets, and its rich, old-fashioned furniture, and the new family carriage, and the fiery black ponies.!

Reuben Taylor and she had been playmates from their early childhood, for their families were neighbors. The first morning she had went to school she had been placed under Reuben's especial charge, and from that time the boy seemed to feel that "little Charity Ames" had large claims upon his good offices. He brought her the first ripe berries in summer and the earliest nuts in autumn; he carried her over the hills to school in winter on his sled; and so their lives grew and blossomed into youth and maidenhood in the quiet little village which sat betwixt the hills and the sea.

Then a terrible blow fell upon the house of Reuben Taylor. A neighbor of his father's, a hard, griping man, rich in fields and pastures, discovered a flaw in the title-deed which had given the old "Brook property" to the Taylors for three-quarters of a century. Farmer Taylor was a plain, honest, industrious man, though by no means an acute business one, and this late discovery of a flaw in the title-deed of the old homestead which had been his father's and his father's before him fell with crushing force on his spirits.

(Continued next issue.)

Vegetable Soup.

Select a soup bone which has good red meat, plenty of bone and a small amount of fat. Put on in cold water and bring slowly to a boil, then simmer slowly four hours. When partly cooked add salt and pepper. An hour before serving add two tablespoonfuls of rice. Cut fine in dice any vegetables at hand, carrots, turnips, potatoes or onions. There should be enough of these to make the soup thick.

Half an hour before serving add to the soup a pint—or more according to the family—of canned tomatoes, juice and pulp, and heat the whole to a quick boil. Now add the diced vegetables and boil briskly till they are done. Fresh tomatoes can be used in season when they should be added with the other vegetables. It improves the soup to allow the stock to cool over night and take off the fat which forms on the top. Then heat and add the vegetables. This can be made in a fireless cooker.

To Prevent Sunburn.

To women whose skin is sensitive and who suffer from sunburn or wind-burn in the summer, the long ride to town is a matter to dread. Even though the face is well protected from the sun, the hot wind produces almost as painful a burn. Avoid washing the face just before going out; it is better to do this several hours before hand, and without soap. Soap and warm water used at night will cleanse the skin so that soap need not be used during the day. Just before starting for a drive rub over the face a good pur, cold cream and over this apply talcum powder. This will form a coating over the skin that the wind and sun cannot penetrate, and it will prevent much discomfort. When the drive is over, wash the face carefully with warm water and just enough good soap to remove the cream. Dry by patting with a soft towel. This treatment is harmless for children if a good cold cream and talcum are used, and will save them painful burns.

Household Helps.

To keep a refrigerator pure and free from odors of food, put charcoal, either powdered or in lumps, in each compartment.

To keep cake moist, put half a lemon in the cake box. Renew frequently to prevent mold.

When cream is too new or too thin to whip well add gelatine. Dissolve one teaspoonful gelatine in one tablespoonful hot water and add to one pint cream, then whip as usual.

If we Only Understood.

Could we but draw back the curtains
That surround each other's lives,
See the naked heart and spirit,
Know what spur the action gives,
Often we should find it better,
Purer than we judge we should,
We should love each other better,
If we only understood.

Could we judge all deeds by motives
See the good and bad within,
Often we should love the sinner
All the while we loathe the sin;
Could we know the powers working
To o'erthrow integrity,
We should judge each other's errors
With more patient charity.

Nothing adds so much to the comfort and cheer of the home as an

OPEN FIRE!

For many years we have made a specialty of Fireplace Fixtures and if you are building or remodelling it will pay you to visit our warerooms or write to us for illustrations and suggestions.

We have a very complete stock of the following:

Wood Mantels of the most modern design
Grates, Fenders, Andirons, Firesets,
Tiles for the fireplace and all other uses, e c.

EMERSON & FISHER, Ltd.,
25 Germain St., - ST. JOHN, N. B.

HERE THEY ARE!

New Fall Fashions for Men and Young Men.

Everything that's new in Men's Wear for Fall and Winter is now here for your inspection. Never before have we had such a varied assortment of styles and fabrics to show you—never have we been able to offer you such splendid value as we do this fall.

We Invited You to Come and See.

No trouble to show the goods. We buy for **cash** and sell for **cash** and are, therefore, able to give you better values than you can get elsewhere.

Special Prices will be given during Exhibition.

Prices of Suits ..$5.00, 6.00, 7.00, 8.00, 10.00, 12.00, 15.00, 18.00, 20.00
Fall and Winter Overcoats.....$5.00, 6.00, 7.00, 8.00, 10, 12, 15, 18
Rain Coats.....$6.00, 8.50, 10.00, 12.00, 14.50
Mens Trousers.....$1.00 to 5.00
Mens Shoes.....$1.50 to 4.50
All-Wool Underwear, Penman's and Stanfield's.....50c to $1.25
Also a full line of **Hats, Caps, Trunks, Bags and Suit Cases.**

On September 1st we are starting a Check System for convenience of the travelling public. You are invited to leave your grip or suit case with us. We will give you a check for it and care for the same until called for **Free of Charge**.

Our place of business is at the corner of Dock and Market Street, three minutes' walk from the Depot. Cars stop at our door every two minutes, also a mail box at the door.

CHAS. MAGNUSSON & CO.,
Cor. Dock St. and Market Sq. St. John, N.B.

FLORICULTURE.

All enquiries in this department will be answered by H. E. Goold, Florist, Sussex, N. B.

Things to be Attended to This Month

Get busy with the hoe and keep all weeds out of the garden.

To keep cats, dogs and birds off the garden place chicken wire or brush over it. Do this until the plants are well up.

Do not water the garden unless it is absolutely necessary. After watering is begun it must be continued regularly until the next rain. Water the roots of plants and not the foliage.

After the young plants are up four inches begin to thin out, so that they stand at the proper distance apart. Always choose to keep the sturdiest of young plants.

Note the following distance for thinning some of the most common garden flowers: Alyssumn, 6 to 12 inches; Asters, 1 foot to 6 feet; Marigolds, African variety, 15 ins.; French Marigolds, 10 inches, and Dwarf varieties 6 inches; Zennias, 2 feet; Poppies, 9 to 18 inches.

The following vines are excellent for covering unsightly spots: Hop Gourd, Wild Cucumber, Ampelopsis, Climbing Nasturtium and Morning Glory.

Try a hedge of Castor Oil Bean plants.

One of the most valuable of annuals as an edging for the shrubbery border, is the Single Petunia, it blooms from spring through untill fall. A double row of Petunias at a trifling cost affords color all summer.

The Tom Thumb Nasturtium, whether in small or large masses, a double row of Pansies, in preference the lighter shades, will produce a charming bed that needs only constant picking to keep it blooming until frost. Moreover, the foliage of the Nasturtium has a distinct color value aside from the flowers and plants. It may be obtained of a pronounced dark shade of green, which, however, is a trifle too odd and striking to be used successfully in every situation, where a short, straight walk leads from the sidewalk to the house.

Petunias, when pinched back sufficiently, make a neat bed.

A very showy round or oval bed can be had by bordering a centre of Necotiana bloom.

The fact that the flowers are closed until late in the afternoon is a slight drawback, but then the fragrance, in a measure, compensates for this. To insure continuous bloom from Phlox the flowers should be removed as soon as they wilt. In making such a bed I have found that it is better to avoid the White Aster.

IN THE FLOWER GARDEN.

Keep the faded flowers picked off as soon as the petals fall. This will prevent seed formation, which means more vigor to the plant and in the case of annuals induce a longer season of bloom. Keeping the garden cleaned up makes it much neater.

Now is the time to look out for Geraniums that are to give flowers indoors during the winter. Select your plants and see to it that they do not produce any flowers this summer, pinch out all bud sas soon as they are seen.

Seeds of hardy prennials may be sown any time during July or August, if they can be gathered. If you want to have perennials flowering next year you must sow this year. "new crop", the earlier the better.

In vain thou weepest, in vain dost yearn,
Those three will never more return.
Constantina E. Brooks.

SIMPSON'S PREPAID EXPRESS

WE NOW PREPAY CHARGES TO DESTINATION

WITH the issue of our new Fall and Winter Catalogue, The Robert Simpson Company Limited, starts a new chapter in the mail order business of Canada.

To further develop our Great Mail Order System and spread its benefits to all parts of the Dominion, we will, until further notice, pay all charges on the great bulk of our shipments, and thereby put our mail order customers on an absolute equality with city customers.

Even if you live a thousand or more miles away, the goods will cost you just what they would in Toronto—no need now to figure out postage, express or freight rates because

The prices you see printed in this new catalogue are, with a few exceptions, exactly what the goods will cost laid down at your nearest railroad station.

This makes Every Railroad Station, Every Post Office, Every Express Office in Canada Practically a branch of this famous store.

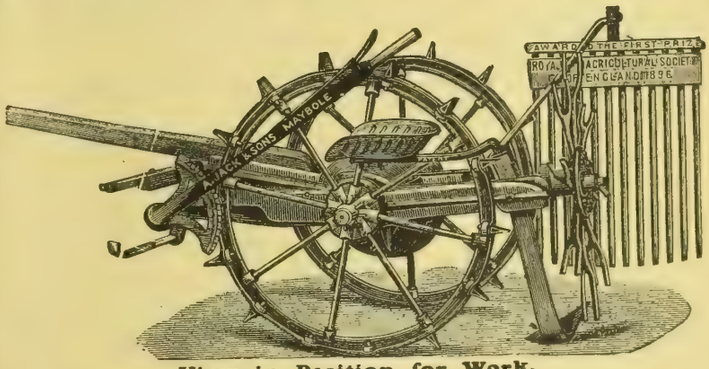
N. B.—To get this new catalogue send Post Card addressed to Department No. 8

The Robert SIMPSON Company Limited
TORONTO

THE WORLD'S BEST POTATO DIGGER

Jack's Royal First Prize
New Patent
Caledonian
Potato Digger

Fitted with Ball and Roller Bearings.



View in Position for Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, Canadian Agents, - - - Port Williams, N. S.

Treatment for Warble Fly.

A correspondent in the Agricultural Gazette states that a very simple inexpensive, and effective way to prevent damage by warble fly is to dress the backs of all cows, heifers, and beasts with a little sulphur, at the time of the appearance of the fly, usually in July. He adds: "I have done so for over thirty years, and very seldom have had one warble to twenty cows and heifers in a herd of over 100 cows and heifers. We use an old tin with some holes made in the bottom with the sharp edge of an old file to dredge the sulphur on the backs from a little behind the hips to the shoulder, and rub it in well with the left hand as it is being dredged on. This is very easily and quickly done after milking, before the cows are untied. One man and myself have done fifty in about half an hour, and the sulphur when bought in a quantity, will not cost more than a penny per head. In very hot summers I have as a precaution, given them a second dressing. This may have been done, perhaps, four or five times in thirty years, but now I do not think it was necessary.

Clover Bloat in Cattle.

Clover bloat is one of the difficulties that we are called upon to treat at this season of the year. Thousands of valuable cattle are lost annually by clover bloat. This may occur in one hour from the time cows are turned out to pasture in the morning and is caused by the giving off carbonic acid gas formed from the large quantities of clover taken into the stomach. We often see cows turned on clover in the morning when the dew is on and are almost suffocated in an hour afterwards from bloat. The cause of the bloat is the over-filling of the paunch in too quick a time, before the stomach has time to act upon it, which sets up the fermentation. The way to avoid this difficulty is never turn the cows to clover while it is wet. It is especially dangerous then. Before turning cows to clover the first thing they should be well filled with other feed so that they will not eat the cloper too rapidly. After they have become accustomed to it they can usually be left in the pasture continuously without danger.

A cow with the bloat manifests symptoms of great distress. The sides are distended and when struck sounds like a drum. The afflicted animal is continually lying down and rising. The breathing is hurried and there is great suffering. If not speedily relieved the rumen will give way, burst or rupture. If this does not happen shortly the brain becomes unconscious and dies. The disease runs its course with fearful rapidity the farmer cannot usually wait for the veterinary, but must act himself, cast aside his timidity and plunge the largest jack knife he can find find or even a butcher knife into the side at at equal distances from the hook point and short ribs on the left side of the animal. In inserting the knife the blade should be extended up and down to leave a perpendicular slit rather than a horizontal one, which will insure a more ready healing, as the perpendicular slit will draw together much more rapidy than the slit in which the the weight of the abdomen will tend to pull it apart.

Nova Scotia Crops, Summer 1910.

Hay crop, immense; grain, potatoes, roots, excellent; pastures never better; live stock flourishing— in fact, a record year for the general farmer; but, fruit, a dismal failure. Such is the season of 1910. Even including the failure in fruit, it will be a great year for Nova Scotia. There will be fodder in abundance, and the farmer will be encouraged to multiply his live stock holdings, and those animals that he now possesses will be in better thrift and give greater returns than for years. And it will not be all lost in the fruit sections. The trees are growing and storing up food for other year's crops. This year's famine is the precusor of record fruit years to come.

SEASON OF 1910.

A mild winter was succeeded by an early spring. March and April were warm months and the grass was almost as forward by the end of the first week in May as it usually is at the end of that month. The last weeks of May and early weeks in June brought cool weather and copious rains. Several frosts were experienced during this period, notably on June 5th and 6th, when considerable damage was done. On lands that were naturally or artificially well drained, crops were put in from one to two weeks earlier than during the previous years; on wet, poorly drained lands, seeding was almost as late as in the previous years. At the present time, growth is much more luxuriant than for many years, but the crops are not any nearer maturity than at the corresponding time last year.

CROP RETURNS.

This crop report is based upon the estimates of 159 correspondents, representing every county in the province. Never have we seen our correspondents come so near agreeing upon the character of the various crops reported upon. The figures given represent the percentage of crop as compared with 1908, and also as compared with a so-called average year.

HAY—ESTIMATED YIELD.

	Upland	Intervale	Marsh.
Compared with 1909	123	112	120
Compared with average crop	121	110	118

Not a single correspondent reports less than a 100 per cent. crop, and several report as high as 200 percent. Newly seeded, well cultivated areas are producing almost as much hay as they could be expected to grow. Some correspondents write that the old lands are not much better than in former years. It will always be thus. In other countries crops must be rotated and lands frequently plowed and seeded if big yields of hay are to be expected Nova Scotia is no exception to the rule, although the procedure of many farmers would lead one to believe that they thought otherwise. Clover is more abundant than usual, which will make the hay all the more nutritious. In addition to the heavy yield this year, from 5 percent. to 10 percent. of last year's crop is being carried over. There is, therefore, in sight, at the present time, many thousands tons more hay than for years. Corresponding reports are being received from all Eastern Canada and the United States and everything points to low prices for this fodder. We would like to see a similar state of affairs

The Full Percentage of Cream

Getting the full percentage of cream from milk depends as much upon the oil used to lubricate the separator as upon the separator itself. Gummy oil will cut the fine bearings of your machine, spoil its balance and waste good cream in the skim-milk pail.

STANDARD
Hand Separator Oil

never gums, never rusts, never corrodes. It feeds freely into the closest bearings and insures the perfect lubrication that is essential to the free spinning of the bowl and the complete separation of cream from milk. It lessens the driving effort and lengthens the life of your separator.

One gallon cans. All dealers. Or write to

The Imperial Oil Company, Limited

Aeroplane View of the Dominion Exhibition Buildings. St. John, N. B.

FIRE, LIGHTNING, RUST AND STORM PROOF

SIMCOE, ONT., April 9th, 1908
"We have handled your 'Eastlake' Shingles for nearly a quarter of a century. They have been on the Court House, Free Library, and other public buildings of this town for 18 years. We have used very large quantities during the past 25 years, and they have always given first-class satisfaction, and have never required any repairs.
(Signed) MADDEN BROS.
Tinsmiths and Hardware Merchants.

Write for Booklet.

The Metallic Roofing Co.
Limited, Manufacturers
TORONTO & WINNIPEG
2459

for years to come, for it would lead farmers to keep and raise more stock of all kinds, which seems to be the crying need if Nova Scotian agriculture is to be improved.

OATS AND OTHER GRAINS.

Compared with 1909 .....107 p. c.
Compared with average .....105 p.c.

On well drained lands, oats and other grains will be relatively as good as hay, but on the wet lands the crop will not be any heavier than last year and in some cases lighter. The general average is, therefore, abodt 11 per cent. lower than hay. Straw promises to be relatively heavy. There is about 5 per cent. more land in this crop than last year.

POTATOES.

Compared with 1909 ..... 95 p. c.
Compared with average.....100 p. c.

Estimates in regard to this crop are quite variable, ranging from 50 per cent. to 125 per cent. The same observations made in regard to the character of the soil in the discussion of the cereal crops apply to the potato crop. Potato bugs have been unusually troublesome, which is usually the case after a mild winter. However, it is yet too soon to say anything definite about this crop. The acerage of potatoes is about 5 per cent. less than in 1909.

TURNIPS AND OTHER ROOTS.

Compared with 1909 .....104 p. c.
Compared with average.....110 p. c.

The prospect for the root crop is extra good. There is an increase in the acerage devoted to mangles of 1½ per cent. and to turnips of 10 per cent. The prospects are, therefore, for 6a onsiderably larger gross return from these crops than for any previous year. This extra amount of roots will provide, along with the hay, a considerably extra amount of fodder for stock.

INDIAN CORN AND OTHER FORAGE CROPS.

There is about the same acerage devoted to these crops which are grown for the purpose of supplementing summer pastures. The yield will be about 10 per cent. higher than last year.

PASTURES.

Pastures are universally reported excellent and have been so ever since the middle of May. Cattle were generally turned out from ten days to two weeks earlier than usual. It is now the month of August and the pasture are almost as green as in June and there seems little likelihood of bare pastures this year.

CONDITION AND NUMBER OF LIVE STOCK.

There is about a 5 per cent. increase in dairy cattle. Beef cattle have been reduced about 1 per cent., and sheep, most unfortunately, still continue to decrease; this year it is estimated to the extent of 3 per cent. Several correspondents complain bitterly of the dog nuisance.

DAIRY PRODUCE.

Everything points to a record year for butter and cheese. Private dairying is growing and figures at present to hand in regard to factory dairying are most encouraging. The Scotsburn Creamery, for example, is producing nearly three times as much butter as last year, and last year's record was double the previous year. One new factory has been established, near Berwick, in Kings County, and several localities are considering the erecting of factories.

FRUIT.

We have finished the optimistic part of our report and now have to consider the most signal failure of the fruit crop since it became commercially established in the province. Several reasons have been adducted for the failure. The season opened unusually early, the fruit buds beginning to swell at least two weeks earlier than in the previous year. Frosts in the latter part of April, followed by cool, wet weather and severe frosts on June 5th and 6th are the explanations most frequently given for a crop that will not be more than one-quarter to one-third (1-4 to 1-3) as heavy as last year. With few exceptions, trees that bore heavily last year, which the majority did, are almost bare this year. Trees which failed to bear last year have, in some cases, a promise of a very good yield this year. The most promising variety is the Baldwin, followed by Spys, Kings and Ben Davis. There are odd sections where Gravensteins and other varieties are quite good, but, for the most part, they are almost a complete failure. The quality too promises to be poor. Owing to the small crop, many have ceased spraying and fungus and other diseases are greatly in evidence. Pears, plums and other fruits are also light. There is no question that the fruit growers will have to face a disastrous year. There are two consoling features. First, the foliage is luxuriant and the corresponding tree growth excellent. This will lay the foundation for a record crop some future year. Second, the orchardist who, in addition to growing trees, keeps stock and grows general farm produce will still have sometning for his year's work. It would be a blessing in disguise if such a year as the present would lead to his example being more generally imitated.

The following telegram just received from A. McNeil, Chief of the Fruit Division, Ottawa, offers a further consoling feature: "Eastern apple prospects lower than last month. Ontario winters very light. Eastern apples and pears, medium; plums, light; peaches good; raspberries, currants, gooseberries and grapes, average. United States apples below the average in Eastern States. Pacific States, full crop. Peaches, good; other fruit, medium. Great Britain, apples below average. Plums, poor; other fruits, below average. Continental apple crop, medium."

ACKNOWLEDGEMENTS.

This report has been compiled by Mr. A. J. Campbell, of the Office of Industries and Immigration, and has been edited by the undersigned. On behalf of all interested, I wish to publicly thank those correspondents from the various counties of Nova Scotia who have voluntarily contributed their estimates.

(Signed) M. CUMMING,
Secretary for Agriculture.

WHEN YOU VISIT THE BIG FAIR

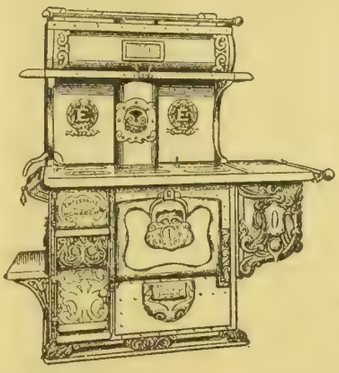
in St. John, Sept. 5th to the 15th, you want to be sure and see our exhibit in the Stove Department in the main building.

We will there show the

Enterprise Monarch Steel Range

With the new

DAYLIGHT OVEN.



This is the greatest improvement ever made on a range, and one that every housekeeper will be delighted with. Don't fail to look it over and at the same time see the many other striking features shown in the Monarch, which may be justly called Canada's Finest Steel Range.

When fitted for wood the Monarch takes a stick 26 inches long. The copper reservoir, which is detachable, holds 9 imperial gallons.

If you are unable to visit the fair, drop us a line and we will mail you descriptive circular with full information.

THE ENTERPRISE FOUNDRY CO., - Sackville, N. B.
Sole Manufacturers.

"What School for My Daughter?"

THE MOUNT ALLISON LADIES' COLLEGE

BECAUSE ☞

It is the Largest Ladies' College in Canada.
It is in a Healthful Town.
It Has Specialists for Teachers.
It Offers Literary Courses. (University Graduates as Teachers,)
It Offers Music Courses. (Staff, Educated Abroad.)
It Offers Oratory Courses. (Teachers of Talent and Training.)
It Offers Household Science Courses. (Certificate is Qualification for Teaching in New Brunswick Schools.)
It Offers Fine Art Courses. (Director an R, C. A.)
Its Aim is True Education, not Surface Culture.

Free Catalogue on application to
DR. B. C. BORDEN
Sackville, N. B.

SEND ¶WRITE FOR FREE CALENDAR

THAT BOY OF YOURS

MOUNT ALLISON ACADEMY
FOR a General, Special or Matriculation Course, Leading to Colleges of Arts, Engineering, Medicine, etc.

TO

MOUNT ALLISON
Commercial College.
FOR a Course in Business, or Shorthand and Type-writing. Comfortable Residence — Excellent Staff of Teachers.

J. M. Palmer, M. A., Principal, SACKVILLE, N. B.
Next Year Opens SEPTEMBER 8th.

If your liver is sluggish and out of tone, and you feel dull, bilious, constipated, take a dose of Chamberlain's Stomach and Liver Tablets tonight befofe retiring and you will feel all right in the morning. Sold by all dealers.

The Tussock Moth.

J. A. R., Kensington, P. E. I.—I forward you, under separate cover, a specimen of an insect. It is doing much damage in the orchard of Mr. J. E. Bagnell, Hazel Grove, and made its first apuearance this season. Mr. Bagnall would greatly desire The Farmer to distinguish the insect and to recommend means of eradicgtion.

Ans. The caterpillar specimen submitted for identification is the larva of the Tussock Moth. There is one generation of the Tussock Moth caterpillar a year. The moths emerge from early May until July or August, deposit eggs in clusters that do not hatch until the following spring. On hatching the young larvae remain clustered over the egg mass for a few days. Then a series of moulting periods take place before the cocoon is formed from which the adult moth finally emerges. The larger larvae often assume a wandering habit, which causes them to leave the orginal food plant and seek others, sometimes at a considerable distance away. As the female moth is wingless, and so heavy that it makes little effort to crawl about, the distribution of the species must take place exclusively in the earlier stages by the caterpillars crawling about and developing to full grown moths in new localities.

There are some parasites that are naturally enemical to the Tussock Moth. Spraying mixtures are not always effective in combating this pest. The more effective plan is to pick and destroy the egg clusters that may be found on the trunk, branches and twigs of the trees before they arrive at the hatching stage and prevent further infection by putting wide sticky bands around the trees which will trap the caterpillars as they attempt to climb the trees. These bands are effective as long as they remain sticky which is generally not more than a week. A mixture of equal parts of tar and heavy molasses or resin and castor oil melted together at the rate of 16 pounds resin to one gallon castor oil and diluted to any desired consistency by the use of more castor oil are very effective as a sticky substance to apply to the lands. If the caterpillars have been allowed to gain access to the trees they may be reduced below the danger point by beating the trees when many of the caterpillars will fall to the ground and be destroyed when they attempt to cross the tanglefoot band on the tree trunks.

The PUBLISHER'S DESK.

Modern lighting system result of 20 years progress. To-day is to illumination what the automobile is to transportation. (General idea on Gasoline as a power) Pituer Co oldest and largest in business. The only inverted light Cheap, easy to operat, durable. Insurance Companies cheerfully grant free permits for its use. No machinery. Safe for all lighting purposes. St. John Company controls Maritime Provinces.

RETSON BROS., EAST COURT FARM, TRURO, N.S., WRITE—"Since advertising in your MARITIME FARMER we have made a good many local and export sales at prices ranging from $80.00 to $225.00. The highest price being received from the Wyoming Agricultural College for the large, white, four-year-old Ayrshire cow Gardrum Dairy Queen. This cow stood second as a three-year-old dry cow at the Fredericton Exhibition in 1909. She is a producer and we trust her to give satisfaction in her new home. You can rely on receiving our ads. in future."

THE TWO CENTRE PAGES of this issue are devoted to C. B. Pidgeon's announcement of valuable free gifts given to cash buyers. This is a plan of advertising which will appeal to all shrewd buyers, for besides the exceptional values which this store gives, the customers also receive the cost of advertising the goods in valuable and useful premiums. C. B. Pidgeon's store is situated corner Main and Bridge St., St. John, just at steam boat landings, thus making it the most convenient store in the town for people travelling on the river, for people travelling by train Mr. Pidgeon announces that he gives free car tickets after purchase is made. On all mail orders of $5 00 or more this firm prepays expressage, so that goods are landed at your door without the slightest expense to you. As the location indicates Mr. Pidgeon's trade is almost entirely with country people, and his immense stock of shoes and clothing is selected to suit this particular trade whtch demands most dependable goods at the lowest prices. If in St. John during exhibition this store will give you a hearty welcome and ask you to make their place your head quarters. If not convenient to go to St. John they take this opportunity to solicit your mail orders guaranteeing you their best services always and your money back if goods are not satisfactory. C. B. Pidgeon, Corner Main and Bridge St., St. John, is the place.

CHEAP FARES TO TORONTO EXHIBITION.—Remarkably cheap fares are announced by the Intercolonial Railway for the benefit of those who desire to attend the Canadian National Exhibition at Toronto. This great annual fair will be held this year from August 27th until September 12th and will have many new features and special attractions. Apart from the attractions of the Exhibition, a trip to Toronto at this season of the year is always enjoyable, and the reasonable rates that will prevail should prove an additional inducement to many travellers.

Round trip tickets will be issued on August 25th, 27th, 29th, 30th and 31st, and on Sept. 7th and 8th, at first class one way fare. On August 26th and September 6th, round trip tickets will be issued at a rate still more reasonable. All tickets will be good for return up to September 14th. These reduced rates afford chances for a cheap and enjoyable trip, and those travelling by the Intercolonial Railway will be enabled to reach Toronto by the shortest and quickest route from the Maritime Provinces The Ocean Limited, which arrives in Montreal at 7.35 a. m., connects with the Grand Trunk Intercolonial Limited, which leaves Montreal at 9 00 a. m., and arrives in Toronto at 4 30 p. m., saving hours of time. The Maritime Express, arriving in Montreal at 6.30 p. m., connects with the Grand Trunk night express for Toronto, leaving Montreal at 10.30 p. m., and arriving in Toronto at 7.30 a. m., the following day. Returning, travellers have their choice of the two finely equipped through trains out of Montreal, the Maritime Express, leaving at 8.15 a. m., and the Ocean Limited, leaving at 7.30 p. m., daily except Saturday.

AT MOUNT ALLISON.—The question as to where to send your son or daughter for further education is answered by the Mount Allison advertisements in last issue. There is no better preparatory school for boys than the Mount Allison Acabemy, one of the oldest of its kind in Canada. There is no better Commercial College in eastern Canada than the one in connection with the Academy. A residental school, the Academy and Commercial College is one in which the most thorough instruction is given under conditions which make for the proper development of character.

The Mount Allison Ladies' College—which includes the College of Literature and Science, the Conservatory of Music, the Massey Treble School of Household Science, the Oratory Department, the Owens Museum of Fine Arts—is the largest in Canada. All its teachers are specialists, the members of the Conservatory staff having been trained in Europe. Its equipment is extensive and thoroughly modern. The school aims to be, and is a home-like institution where the development of the individual student along all lines is sought. In this fact is to be found the reason why the school has attained its leading position.

A calendar of the Academy and Commercial College will be sent free on Application to Mr. J. M. Palmer, M. A., Sackville, N. B. The Ladies' College Calendar will be seut free if application for it is made to Dr. B.C Borden, Sackville, N.B.

The attention of our readers is drawn to the advertisement of the Enterprise Foundry Co. in this issue. This company have one of the largest and best equipped foundries in this country and their stoves are now being sold in every province in Canada.

At the Dominion Fair to be held in St. John between Sept. 5th. and 15th., which no doubt every reader hopes to attend, they will make a very comprehensive display including the Enterprise Monarch Steel Range, the Enterprise Blazer Hot Air Furnace, as well as a full line of their other well-known and popular stoves.

The central features of their exhibit, however, will be the new Daylight Oven as applied to their Monarch Range. This consists of a Glass Oven Door made in three panels from glass that has been specially made and thoroughly tested They have been working on this improved feature for a long time in order to prove entire practicability before placing it on the market. Those who have seen this glass door are immediately struck with the advantages it offers and the wonder is that it has never been thought of before. By its use the contents of the oven can be seen by merely glancing through the door without having to open it. It is certainly most credi table to the enterprise of this company that they should be the first to introduce this entirely new improvement. We heartily recommend our readers to make a point of seeing this exhibit.

THE RURAL SCIENCE SCHOOL, TRURO, N. S.—The Rural Science School for teachers, which was convened on July 12th at the affiliated Nova Scotia Agricultural College and Normal College, closed its session on August 12th. There was an enrolled attendance at thisschool of 136 teachers, of whom 53 took Physical Drill alone and 83 took classes in connection with the Rural Science course, which is provided each summer at these institutions. This summer session was a very successful one and the teachers in attendance put in a most profitable part of their holidays studying plants, birds, insects, rocks, soils, and at the same time, observing the operations in connection with the Agricultural College Farm. The underlying idea of this school is to give the teachers in attendance a deeper knowledge of the science related to agriculture and other industries, so that they can teach these to better advantage, more especially in the rural schools and thus lay a foundation for more intelligent application of agriculture in the various spheres of industry. When teachers have completed the full course laid down in connection with this Rural Science, School, which will require from two to three vacation periods, as well as interim study, they will receive the Rural Science Diploma and, when evidence is given that they are putting their teaching into practice, will receive an extra Government grant.

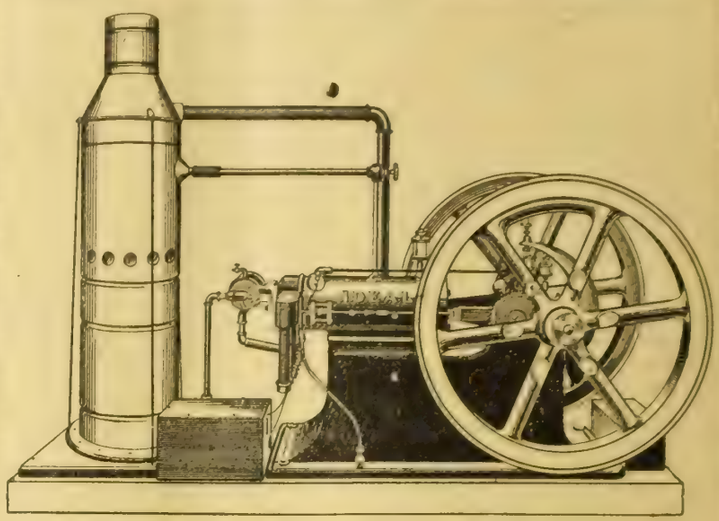
SPECIAL AWARDS AT DOMINION EXHIBITION—Silver trophies, medals, extra cash, etc., in addition to $25,000 prize money.

Over $25,000 is to be distributed at the Dominion exhibition in St John, N. B., September 5th to 15th next, in awards for live stock, agricultural, and horticultural product, dairy shows, poultry, horse exhibits, women,s work and educational department. This is a magnificent sum, made possible by the very generous grant of the Federal, Provincial, and Civic Government: A strenuous competition has thus been induced in all the departments above mentioned with the result that even in face of the fact that new buildings have been erected and a general rearrangement of spaces affected there is scant, if any room for an over-plus of exhibitors. In addition to the cash prizes of $25,000 there will be magnificant silver trophies, gold, silver and bronze medals, diplomas and badges of merit.

FREE Trip to St. John Exhibition for YOU!

If You are Thinking of Buying

A Gasoline Engine.



READ OUR OFFER

DURING THE BIG DOMINION EXHIBITION IN ST. JOHN, N. B., SEPT. 6th to 15th, we make the following extraordinary proposition to any or all farmers interested in the use of a Gasoline Engine on their property.

To anyone purchasing from us a Gasoline Engine for farm uses, we will cheerfully write a check for the purchaser's bill of expenses to and from St. John. This means all reasonable outlay, such as fares. board, lodging, lunches, exhibition, etc.

We make no extravagant claims, merely stand firmly behind our "Ideal" Engines and will guarantee absolute efficiency and satisfaction.

You May Try Them First,

Pay Afterwards !

Our "Ideal" Engine cuts labor bills in two at sawing, threshing, grain-grinding, pumping and other kinds of farm work.

See Ue at the Exhibition

IN MACHINETY HALL.

J. A. PUGSLEY & CO.,

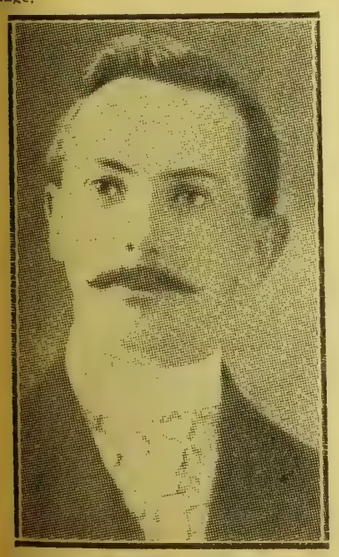
29 Dock Street, - ST. JOHN. N. B.

mong the special trophies is a huge,solid silver, old lined cup with ebony base presented by the ank of New Brunswick for the best Shorthorn ull; Another handsome silver cup by the same anking institution for the best Agricultural orse; The Petrie Manufacturing Company imited will give a ladies gold watch for the est 10 pound roll or print of butter made rom cream separated by their machinery. he Clydesdale Horse Society of Great Britain ill donate two gold medals and one silver ledal for the best Canadian Clyde mare or filly; pecial cash prizes are to be given by the Hols-ein-Friesian Association of Canada; a special rize by the Hackney Horse Society of Great ritain in the Hackney classes; gold silver and ronze medals by the Canadian Bank of Com-erce, for Grand Champion Ram, Reserved rand Champion Ram, and for best herd of airy cattle. In the agricultural section the rovincial Chemical Fertilizer Company Ltd., f St. John, offer cash awards to bona fide rowers, and Messrs W. A. Tlee Burpee & Com-any seedsmen of Philadelphia, make similar ash awards, as does the Bowker Fertilizer ompany, of Boston Mass. Numerous other nedals will be awarded by the Exhibition As-ociation and industrial sections as well

James L. McAvity
of the McLean Holt Co., St. John.

One of the most interesting and enterprising irms in the province is the firm of McLean Holt & Co., manufacturers of the famous Glen-wood Ranges,and all sorts of railroad and other astings. This enterprising firm is owned by Jas. L. McAvity, who though a young man has leveloped great business ability and is connect-d with several of the largest bussiness firms n the province outside the McLean Holt Co. He is also commanding officer of the 62 Fusilers, nd a director of the N. B. Telephone Co. The oundery of this company is situated on Court-ney Bay which will be utilized by the Grand runk Pacific Ry. in the near future, thus im-roving the shipping facilities of this range for which there is an increasing demand. The plendid fitted up salesroom which has recently een enlarged and repainted and in which the Pitner lighting system has been enstalled is situated at 155 Almon St., where visitors are al-ways welcome to inspect and purchase these xcellent ranges. This department is in charge f R. H. Irvin, who has proved his worth as a nanager and salesman of a retail stove store. During the past 16 months Mr. Irvine has sold 43 ranges or over 21 a month on an average.

When asked about the wonderful success of he past 16 months Mr Irvine said he considered t due to the quality of the article he had to sell nd to the way that Mr. McAvity allowed him o advertise, also to the co-operative work of wner and employees in general. This firm will ave an exhibit at the Dominion Exhibition, where visitors can get an idea of this famous ange.



R. H. Irvin
Sales Mgr. for McLean Holt Co., St. John.

St. John, N. B. DOMINION EXHIBITION SEPT. 5 to 15

EASTERN CANADA'S GREATEST FAIR.

Cheap Transportation!

READ THIS SCHEDULE THEN SAVE IT

C. P. R. EXCURSIONS

ALL POINTS IN CANADA WEST OF MONTREAL to and including Fort William, Single Fare for the round trip, tickets to be dated Sunday, Tuesday and Thursday, September 4, 6 and 8th. Special excursion fares Monday and Wednesday, September 5th and 7th.

FROM MONTREAL AND STATIONS IN CANADA, EAST OF MONTREAL to and including Megantic. Single Fare for the round trip, Monday, Wednesday, Thursday and Saturday, September 5, 7, 8 and 10. Special Excursion fare Tuesday, Friday and Sunday, September 6, 9 and 11.

All tickets from Ontario and Quebec will be good for return passage until Sept. 18th.

Special excursion fare from points west of Montreal will be made by adding Two-thirds Fare plus twenty-five cents to Montreal to $9.80 from Montreal

FROM STATIONS ON THE ATLANTIC DIVISION, N. B., and State of Maine. Tickets will be on sale at Single Rate for the round trip Sept. 3rd to 14th inclusive. Return limit September 16th. Special low rates as follows :

POINTS ST. JOHN TO FREDERICTON INCLUSIVE.

Going Sept. 7th; Return Sept. 9th.
Going Sept. 9th; Return Sept. 12th.
Going Sept. 12th; Return Sept. 14th.

FROM HOULTON BRANCH, ST. ANDREWS BRANCH, ST. STEPHEN BRANCH, St. John Section, Vanceboro Section, Woodstock Section.

Going Sept. 6th; Return Sept. 8th.
Going Sept. 8th; Return Sept. 10th.
Going Sept. 10th; Return Sept. 13th.

FROM BROWNVILLE SECTION AND THE MOOSEHEAD SECTION.

Going Sept. 6th; Return Sept. 9th.
Going Sept. 9th; Return Sept. 13th.

FROM AROOSTOOK BRANCH, EDMUNSTON, GIBSON BRANCH, Northern Sect., Tobique Branch.

Going Sept. 6th; Return Sept. 10th.
Going Sept. 10th; Return Sept. 14th.

I. C. R. EXCURSIONS

FROM ALL STATIONS IN NEW BRUNSWICK from September 7th to the 14th, One-way First Class Fare for round trip. Agents between Moncton and St. John will be the only ones empowered to sell this ticket on the last day of the Fair.

FROM STATIONS IN NOVA SCOTIA AND CAPE BRETON it is proposed to issue One-way First Class Tickets (good for round trip) on the following dates : September 2, 5, 7, 9, 12.

FROM STATIONS IN THE PROVINCE OF QUEBEC-LEVIS and East One-Way First Class Tickets (good for round trip) on September 1, 5, 7, 9, 12.

NOTE—All tickets issued at first-class one way fare will be good to return leaving St. John up to the including date following close of Exhibition viz , September 16th.

Special Excursions

FROM STATIONS IN NEW BRUNSWICK—each day during the Exhibition at Two-Thirds First Class One-way fare for the round trip. These excursions are to be gauged to allow visitors a full day in St. John.

FROM STATIONS IN NOVA SCOTIA AND CAPE BRETON—Tickets will be issued on the same Two-Thirds First Class One-Way Fare basis as in New Brunswick and the days set apart are the 7th and 12th of September, with the time limit for return Sept. 16th.

FROM STATIONS IN THE PROVINCE OF QUEBEC-LEVIS AND EAST. Two special days at the same Two-thirds First Class One Way Fare, viz., September 6th to 12th. Time limit September 16th.

Extra Special Excursions

TWO SPECIAL EXCURSION DAYS BY SPECIAL TRAINS from Amherst and intermediate stations into St. John on Sept. 9th and 13th. Tickets for this trip will be good going and returning on these special trains only and the fare is to be One Half First Class One-Way Ticket for the round trip.

FROM THE TERRITORY NORTH OF MONCTON specially low fares will be issued Sept. 9th and 12th, good to return until Sept. 12th and 14th, respectively. On the Point Du Chene branch tickets will be issued Sept. 9th and 12th, good to return until September 10th and 13th respectively.

DOMINION ATLANTIC RAILWAY—One Fare Return Ticket from all points on that railway and steamship system in Nova Scotia.

PRINCE EDWARD ISLAND—Special Fares on P. E. I. Railway and on the steamers of the Charlottetown Steam Navigation Company.

EASTERN STEAMSHIP CO.—A $6.00 Return Fare from Boston, with proportionately low rates from nearer coastwise parts.

NEW ENGLAND PASSENGER ASSOCIATION—Co-operative rates on all lines in this territory. This Association includes the Boston and Albany Ry.; Boston & Maine; C. P. R.; Central Vermont Ry.; Eastern S. S. Co.; Grand Trunk Ry ; Maine Central Ry.; New York, New Haven and Hartford; Quebec Central Ry., and Rutland Ry.

SPECIAL FARES ON ST. JOHN RIVER STEAMBOAT LINES, THE SHORE LINE RAILWAY AND ALL LINES RUNNING IN THE MARITIME PROVINCES.

Local Ticket Agents Will Quote Figures !

Boarding and Lodging Lists Sent Free

Plan Your Vacation from Sept. 5 to 15

ACADIA LADIES SEMINARY.—The Catalogue of Acadia Seminry whose advertisement appears elsewhere in our columns has come to our table. An examination of this booklet which is admirably printed and illustrated shows that the work of this well-known school, which, during the last six years has more than doubled its attendance of resident and non-resident pupils is organized in three departments. The Acadia Department includes the Collegiate, the Sophomore and Freshman Matriculation Courses, making provision both for those who desire to supplement and continue the ordinary work of the public school and for those who desire to prepare for college. The Department of Fine Arts includes courses in music, Pianoforte,voice, violin, with the usual Thoretical branches, Art of oil, water and china painting, together with work in arts and crafts, and oratory, graduation from which course prepares the pupil for entrance with advanced standing into the leading schools of expression on the Continent. The Department of Practical arts offers courses in Household science, business, stenography and typewriting. All of these courses are characterized by breadth and thoroughness and aim not merely to prepare the pupil for technical fitness for the arts of profession but for complete living. To do this work a staff of twenty teachers, qualified by training, temperament and experience is employed, Because simplicity in living and dressing, high ideals of conduct and thoroughness in work are insisted unon, because the location of Acadia Seminary is ideal, both in respect of beauty of euviroment and healthfulness, because the standard of simplicity offers the very best educational advantage for the minimum expense, Parents who appreciate values in education are more and more turning to Acadia Seminary as the one school which offers the largest and best returns for the smallest possible outlay. We notice also that a fully qualified Physical Instructor and a Trained nurse have the care of the physical life of the pupils. Full particulars concerning the work of the school in its various departments may be had from the catalogue which will be sent free upon application to the Principal, Rev. H. T. DeWolfe, D. D., Wolfville, N. S.

Be sure and take a bottle of Chamberlain's Colic, Cholera and Diarrhoea Remedy with you when starting on your trip this summer. It cannot be obtained on board the trains or steamers. Changes of water and climate often cause sudden attacks of diarrhoea, and it is best to be prepared. Sold by all dealers.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. McLEAN & SONS, Hopewell, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

FOR SALE.—A Jersey bull calf, from deep milker (Jersey), sire "Pride of Chamcook," cheap.—J. HERBERT GRIMMER, St. Andrews, N. B.

BUYERS OF DRESSED PORK.—We can take delivery from now out, 100 to 300 pounds each. Prompt returns.—JOHN HOPKINS, St. John, N. B.

FOR SALE.—Two hundred acres of land, part in good cultivation, with or without crops, two acres in fruit trees. Near post office, school, R. road. For further particulars, apply to CHAS. E. NICKERSON, Gardners' Mills, Yar. Co., N. S.

DAIRY AND STOCK FARM FOR SALE.—Three miles from Sussex, 300 acres, 200 acres under cultivation, large intervale, cuts 80 tons hay. Good two-story house heated by furnace, water pumped by windmill, good barn.—HARVEY B. PARLEE, Sussex, N. B.

THREAD POWER FOR SALE.—One second hand two-horse Moody thread power for sale cheap. First set of planks still on the machine Write POWER care of MARITIME FARMER' Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc, Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

BERLINER GRAMAPHONE FOR SALE.—First-class order. Company's guarantee not yet run out. This splendid instrument, costing sixty-five dollars, will be shioped, with over twenty dollars' worth of fine records for thirty dollars cash. Write GRAMAPHONE, care of MARITIME FARMER, Sussex, N. B.

Perfection Ideal Band

It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

Dyke View Farm!

We offer for sale Guernsey Heifer, two years old in July, and Calves, also one Bull, 18 months old, that is a direct decendant of Sheet Anchor and Cassipia, second prize cow at the Pan America Model Dairy, also Bull Calf, six months old, Agricultural Societies please note.

WILLIAM COX & SON,
Long Distance 'Phone. Canard, Kings Co., N. S.

Calves Raise Them Without Milk
Booklet Free
A. A Archibald & Co., Truro, N. S

Your old Carpets will make you handsome Rugs. Write for booklet, mailed free.—The MARITIME RUG WORKS, St. John, N. B.

MARKETS.

Halifax Prices.

GRAIN—Oats, 53c.

FEED STUFFS—Bran, $22,00; shorts, $25.00; oil-cakes, $2.15 per bag; linseed meal, $2.15 per bag; cottonseed meal, $2,15 per bag; gluten meal, $1 50 per bag; corn meal, $1,65 per bag.

DRESSED MEATS—Beef (carcass), country, 8½c to 9c; veal, 8½c; lamb, 12c per pound; pork, 12c per pound.

HORSES—Drafters, $200 to $300; roadsters, $250 to $350; carriage, $150 to $250.

DAIRY PRODUCTS—Creamery butter, prints, 26c; solids, 24½c to 25c; dairy butter, tubs, 19c to 20c; prints, 20c to 22c; cheese, twins, 12c to 12½c; large, 11½c to 12c.

POULTRY AND POULTRY PRODUCTS—Eggs, fresh, 21c; fowl, 13c per pound; chickens, 90c per pair; ducks, 75c per pair.

FRUIT—Apples, $3.00 to $5.00; pears, $1.00 per 11 quart basket; plums, $1.00 per 11 quart basket.

VEGETABLES —Potatoes, $2.10 per bbl.

MISCELLANEOUS—Hay, $14.50; straw, $10.00; wool, 21c white, washed; beef hides, 9c to 9½c; calf skins, 14c to 15c per pound; sheep skins, 30c to 40c.

MARKET REVIEW AND FORECASTS.

The butter market remains unchanged. Supplies still continue to come forward freely. Owing to good pasturage, the market continues good and prices have not advanced as usual at this time of year.

CHEESE.—The market continues weak in sympathy with Ontario and Quebec prices.

EGGS.—These have become scarce and prices have advanced sharply and receipts are of only fair of ordinary quality, still higher prices are looked for.

APPLES.—Mature apples are now coming forward, but from all reports the outlook is anything but bright for a good yield.

Ontario fruits are now coming on this market in car lots and will so continue until the end of October.

Charlottetown Prices.

GRAIN.—Oats, 40c to 44c.

FEED STUFFS.—Bran, $1,25; shorts, $1.50; middlings, $1.50; oil-cakes, $2,25 to $2,50; corn meal, $1,90 to $2.00.

LIVE STOCK.—Butcher's cattle, 5c to 5½c; stockers, 4c to 4¾c; milch cows, $35.00 to $45 00; sheep, 3½c to 4½c; lambs, $3 50 to $4.50.

DRESSED MEATS.—Beef (carcass), 9c to 10c; beef (retail), 12c to 16c; mutton 9c to 11c; veal, 5c to 6c; lamb, 11c to 12c; pork, 9½c to 10c.

HORSES.—Drafters, $125 to $200; roadsters, $150 to $225; carriage, $150 to $225.

DAIRY PRODUCTS.—Creamery butter, 22c; prints, 23½c; dairy butter, 17c to 19c; cheese, 10½c to 10⅝c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 16½c to 17c; fowl, 10c to 12c; chickens, 50c to 75c per pair.

FRUIT.—Apples, 20c per peck; raspberries, 5c pound; currants, 12c to 16c.

VEGETABLES —Carrots, 60c to 80c; potatoes, new, 60c; turnips, new, 35c to 40c; beets, 60c to 80c.

MISCELLANEOUS —Hay, loose, 30c to 35c; pressed, $7 00 to 18 00 per ton; straw, $5.00 to $5.50; wool, 23c; beef hides, 8½c; calf skins, 10c sheep skins, 30c; lamb skins, 25c.

MARKET REVIEW AND FORECASTS.

Not much to report in the way of market changes. Hay is lower, but very little changing hands. Oats are easy and our quotations are about market value for shipping, the outside price being for black. New potatoes are now on the market and will soon be plentiful. New oats will be offering within a week or 10 days. Cheese market was easier last word; sales were made at 10½c. Butter is firm at 22c for creamery, but dairy is in good supply and prices are easy, only fancy would bring higher prices. Beef is plentiful as is usual at this season and we look for lower prices. Trade in general is good and the prospects are for an abundant harvest in all lines, except small fruits, which are scarce and price above normal.

St. John Prices.

With the opening of the Dominion Exhibition less than two weeks distant, there is naturally a universal movement of preparation for what will doubtless be by far the largest influx of visitors during any ten days in the history of the city. The visitors to former fairs in St. John will be at once struck with the enlargement of the grounds and buildings for this year's exhibition, and the great improvement made in the system of arrangement There will be a much greater variety and more exhibits and special features than have been seen at any previous fair in St. John, and never have such arrangements been made for special excursions and for housing the visitors

Wholesale merchants are making preparations to extend courtesies to out-of-town customers, and a feature of exhibition time will be the meeting together of men in all lines of trade, and such exchange of views on trade matters as will doubtless be of much benefit to all concerned

At the present time trade generally is quiet, but conditions are sound. The farmers expect to harvest good crops, and price are favorable to the producer. The dairymen are having an excellent year. The fishermen have not had a very good season.

There have been some changes in quotations since last report. Oatmeal is higher. Beans, cheese, butter, and eggs have also advanced.

Flour and meal.—The only change is in oatmeal, which has advanced. Hard wheat patents, $7 to $7.05; choice patents, $6,25 to $6 35; medium patents, $6,05 to $6.15; oatmeal, $5.50; cornmeal, $3.40 to $3.45.

Provisions.—Pure laid is easier, there is no other change. Domestic mess pork, $29 to $29.50; American plate beef, $20 to $20.50, Lumberman's XXX, $15.50 to $16; lard, tub base, 15½c.; compound 13c to 14c.

Beans.—The price has advanced and there is likely to be a further rise, as American buyers have picked up considerable quantities in Ontario The present quotation is $2.20 to $2.25.

Produce —Prices have advanced. Cheese is now quoted at 12c to 12½c; butter, 21c to 22c for choice tubs; and eggs at 20c per dozen and rather scarce.—Maritime Merchant.

C. H. SHAFFNER, SOUTH FARMINGTON, N. S.—I regret that I have to report a short crop of apples in this section. Probably not more than 25% of an average crop. Other farm crops, such as hay, grain, potatoes, etc., are very fine, probably 20% above the average, particularly the grain crops.

J. HOWE COX, CAMBRIDGE, N. S.—The apple crop here in the valley is nearly a failure. Some of our best varieties, such as Gravensteins, Ribstons and Blenheims are total failures. The best crops are found along the south range. I estimate not more than one-third of last year's crop. Quality, poor. Prices will likely rule high.

J. E. SHAFFNER, LAWRENCETOWN, ANAP. CO., N. S.—I regret to say prospects for fruit in this section of the valley are not bright. We will not produce more than ¼ of the season's crop. The quality is off also, spot being quite prevalent. We are having a very fine season for all crops, outside of the apples, and with seasonable rains the fruit should grow to a large size, which will help us to a certain extent.

L. O. NEILY & CO., AYLESFORD, N. S.—In regard to the prospect for the fruit crop in this section for the coming season, heavy frost the last days of April did very much injury to the buds, as they were much further advanced than for any season for years. Again on June 4th we had a heavy frost which did considerable more damage. Taking the apple crop as a whole, there will not be more than one-third of last year's crop. Pears are at present looking fairly well and will probably be an average crop. Plums are a light crop, especially in some sections and will not be more than 50% of a crop. Cranberries are about a total failure.

W. A. MACKAY, MANAGER SCOTSBURN CREAMERY, PICTOU CO., N. S.—The present year promises to be the most prosperous one here for the farmers for many years. The hay crop is just about all gathered in and is the heaviest and got in in the best shape for a long time. The weather has been almost ideal for hay making during the past two weeks, only a couple of small showers interrupting the work. Grain and root crops are also promising good. Much more attention is being given to dairying than formerly and nearly all are noticed patronizing the creamery, rather than making the butter at home. The output of butter for July was over 23,000 pounds as compared to about 8 000 pounds a year ago and 4,000 pounds in 1908. The supply for August is keeping up well. Many are starting to feed green feeds to their cows. Prices for butter have ruled high all season and prospects are for higher prices, soon as the make gets smaller.

Montreal Prices.

Butter, 21¾c to 23c cheese, 10¾c to 11¼c; oats, 38c to 41½c; wheat, $1.01 to $1.03; corn 70c to 71c barley, 48c to 49c; buckwheat 54c to 55c; hay, No. 1, $12.50 to $13.00; No. 2, $9.50 to $10,00; No. 3 $8.50 to $9 00; clover mixed, $8.50 to $9 00; straw, $5.50 to $6.00; eggs, 21c to 22c; hides 8c to 10c calfskins, 12c to 14c; lambskins, 30c each.

Meet your friends at the Maritime Farmer Tent at the St. John Exhibition.

HORSEMEN ATTENTION!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. They cure Cough, Cold, Distemper, Colic, Glanders, Spavin, Pink eye and all diseases of the Horse.

TRURO, N. S.

Dear Sirs,—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse liniment. The cough was of twelve months standing. In my large expeience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends.
E. J. ANDERSON.

BEAR RIVER, N. S.

DEAR SIRS,—
We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it.
Yours truly,
CLARKE BROS.

The MARITIME FARMER will have a tent on the Exhibition Grounds at the Dominion Exhibition, St. John. Make it your headquarters while attending the big fair. Plan to meet your friends there. Pens, Ink and Stationery will be supplied Free.

EUREKA CYCLONE ANIMAL EASE

Makes Horses, Cattle and Sheep glad, as it keeps the Flies from annoying them; is a vermin killer as well as a fly killer; a cleanser and disease preventer. Clean and easy to use.

PRICES:

Quart	**$. 50**	**1-2 Gallon**	**$ .75**
1 Gallon	**1.25**	**2 Gallons**	**2.25**
5 Gallons (per Gallon)			**$1.10**
Use our Special Sprayer. Price			**50c**

Eureka Mercantile Specialty Co., 61 and 63 Peter Streets, ST. JOHN, - - N. B.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., September 6, 1910. Number 23.

Agricultural Societies and Education

ONE of the most potent factors next to the Agricultural College, and agricultural literature, in stimulating the young men of Maritime Canada to higher efforts along the line of modern agricultural methods is a well organized agricultural society. Under its auspices Institute meetings are held and through its various channels a steady stream of practical informatian is being dispensed.

Not unfrequently one hears the remark, from some persons who attended a society or institute meeting, which was addressed by some authority on agriculture, "I did not hear anything that I did not know something about before." This may be true, but, have you been putting into practice that "little something" you knew about the subject. If not, the oftener you hear the fact repeated the sooner will you be led, almost involuntarily, to put into practice what you know. It is a well known fact that to some the ideas set forth at these meetings are revelations along their line of work of which they had not previously been informed and which they will eagerly grasp and strive to follow, as the light creeps in that shows them where they can improve on their past methods. It matters not, then, how feeble the effort for advancement that is put forth by an agricultural society or an institute some one will benefit therefrom as surely as day follows night.

But not all our readers are members of an agricultural society. To those who are still beyond the pale of the agricultural society, we would say: If there is not an agricultural society in your district, "get busy," send for particulars re the organization of agricultural societies, to the Secretary of Agriculture for your province and he will gladly assist you in the work of organization. Interest your neighbors in the matter and in a short time the difficulty of not having an agricultural society will have been overcome. In cases where an agricultural society exists and some farmers stand aloof and refuse to cast in their lot with their fellow men, perhaps through prejudice or some personal feelings, our advice would be: "Don't". In matters pertaining to agriculture, if you would not wish to be a clog on the wheels of progress, cast aside all prejudice and personal feelings and join with your fellow farmers in advancing your common cause. Instead of using the expression "if they would do such and such" which is so often heard, stop using the third personal pronoun "they" and in its place use the first personal pronouns "I and we" as the occasion requires and go forward to make the agricultural society in your district, better because you are a member, always remembering that the success of any society is measured by the interest that is taken in it by its individual members. The various agricultural society secretaries are now preparing their membership lists for the year 1910-11. If you have not already become a member and are too late to send your name and fee today be sure to send early tomorrow. It is only a matter of a few weeks until the secretaries will be called upon to hand in their lists, so do not delay lest you forget.

The following article on Agricultural Societies and Education," an address by President W. J. Black, of the Manitoba Agricultural College, Winnipeg, before the annual convention of the Ontario Association of Fairs and Exhibitions and which although addressed to Ontario farmers is just as applicable to Maritime Province farmers and will be read with interest by our readers who are now agricultural society members and should give an impetus, towards joining to all those who are still outside the fold of their district agricultural organization :

"As representatives of the Agricultural Societies of Ontario, I take it that you are public-spirited citizens, interested in not only those things which go to develop your own Province, but those of all Canada. In my experience, the leading men in Agricultural Societies, and those whose mark is most worth while are those who never get properly paid for their efforts, but who continue on from year to year, working in the interests of their community.

"In a recent address, J. J. Hill, that noted railway builder and master of the science of commercial economy, said: "The American people have many problems of a political, economic, and social nature to settle, but none so important as the true relationship of the nation to the soil." If we apply this statement to our conditions in Canada, we will agree that this is our greatest problem also. The soil is the life of the nation; upon the extent to which we develop our agricultural resources and the intelligent use that is made of them, depends very largely the future greatness of Canada.

"No other natural resource in this country is comparable with nature's storehouse of plant food within the soil. In the year 1908, according to estimates furnished by the Department of Statistics at Ottawa, Canada produced from the mines, forests, lakes and fields, including live stock, about $960,000,000 and of that amount 85 per cent. came from the farms.

"It is estimated that we have not less than three hundred million acres fit for cultivation, only forty millions of which have yet come under the plow. We, therefore, stand in need of a vast increase in population; we need immigrants, intelligent, capable and willing to work, and to learn how to make the soil productive. We need likewise improvements in our agricultural methods. Looking at conditions in agriculture we have to conclude that the wealth of the farm is in its waste.

"In many of our most important manufacturing industries, there has been great advancement in recent years in the matter of making of value products otherwise wasted. Indeed, it is conceded that in such industries as meat packing a comparison of present-day methods with those of fifteen years ago shows that sufficient is being gained by the introduction of new methods to pay the cost of running these plants. It is probably not too much to say that were the average manufacturing concern managed with as little attention to the elimination of waste as there is given to farming, it would not be in existence any length of time. We shudder as we investigate conditions.

"In this Dominion on our cultivated lands we lose by noxious weeds alone more than five times as much as is being spent for the maintenance of our colleges, schools and universities. In the West, being a land of newer occupation, wasteful methods prevail more generally, perhaps, than in this Province. A careful estimate has led us to the conclusion that our waste from weeds alone is not far short of ten times the amount paid for educational purposes.

"Some time ago I had occasion to ask a class of young men coming from different Provinces of Canada to name on examination the practices in farming which they considered most wasteful. From their replies I received such answers as this :

1. Feeding farm horses, idle in the winter, a ration much more expensive than an equally nutritious one.
2. Keeping for dairy purposes cows unsuited for the purpose.
3. Sowing dirty seed.
4. Shipping valuable constituents off the farm.
5. Growing grain to sell only.

These and three score others were given, any one of which, upon careful examination would show on an average a considerable loss.

"The most immediate need of the time, therefore, is Education; and I mean to interpret that term in its broadest sense—Education, that which fits individuals for their life work. By your Act of Incorporation you are educational organizations. Your object is stated to be the promoting and improving of agriculture. By awarding premiums for live stock, for agricultural machinery, and production of grains and vegetables; by organizing plowing matches, holding seed fairs, growing farm crops, etc., you aim to improve conditions in agriculture; to demonstrate teach, inspire and educate. You stand by your Act of Incorporation as organized instruments to direct the minds of the people to the conservation of our agricultural resources. You exist to educate against waste, to demonstrate that the highest conception of the nation is that of a trustee for posterity.

"Great discoveries have been made in the realms of science during the last few years. Many old industries have been transformed, and many new ones have come into existence as the result of the quiet, patient work of the scientist in his laboratory. Even our social life and customs are changing rapidly by the more general use of such appliances as the telephone and motor car; and yet it is a well-known fact that no industry at the present time is making less use of science and its revelations than agriculture.

"Every vocation or calling in life stands before the public in accordance with the intelligence of the men who represent it. No industry demands more fully a combination of intelligence and energy than farming. The necessity for energy need not be discussed. It is apparent. It is evident also that we must as a nation keep pace with the development of other nations. We must prepare to place the products of our soil upon the markets of the world at as low a cost and at as great a profit to the producer, as the people of other countries receive for theirs. Having in mind our debt to posterity, we must see to it that the men of the next generation are now being afforded proper facilities to prepare themselves for the mighty struggle of competition.

"Improvements in transportation have brought us closer to other countries; and it is no longer a trip of three weeks by passenger steamer to London, nor one of two months to South America. Every year the nations of the earth that place their food products on the same markets as we do are being drawn closer together.

"Two of the most significant movements of modern times are the accumulation of wealth and the increasing desire for education. The

nations which are progressing most rapidly, undoubtedly, are the nations which are paying most attention to technical education. Take, for example, Germany. Thirty years ago the people of that country set about to establish technical schools in which their boys and girls might become proficient in the application of science to the production of the various essentials to human existence. So great was the advantage found to be derived from these practical institutions, that the German people have found it desirable to increase them greatly in numbers, the result being that, as they did so, the cost of producing the various products of their industry has become less, for it always follows that in the application of science to production, the cost is lessened. The result of this far-sighted policy on the part of this European nation has been very clearly seen in the recent political struggle in England. We are told that the products of German industry have been in some cases displacing those in the home land, because they are purchasable at a lower price.

"Most Canadians believe it to be our duty to contribute in some form to the Empire's Navy, in order that the great nation, of which we are proud to be a part, may remain naval mistress of the seas. We seem to consider Germany our chief competition in this struggle, and yet we overlook very largely the desirability of being able to compete with such a great country for future commercial supremacy. Should we not, in aiming to be a part of a great navy, aim with equal earnestness to have the steamers that leave our ports for the foreign markets heavily laden with those things which should be worthy of the protection of a great navy.

"Other countries have started later than Germany to emphasize technical education, and the results of their efforts are already noticeable. Japan may be mentioned as one of these, because the rapid rise of the Japanese people can be attributed to no single factor so much as the emphasis which they have placed on education. During the last fifteen years the brightest young men of this oriental country have been found in all the leading universities of the world. They, in many instances, received funds from the home government to enable them to be educated in the universities of the United States, Germany and England, afterwards returning to become the people's official advisers in organizing institutions and drafting laws best calculated to make that country a strong competitor in the race of nations.

"But, apart from the development of a sentiment that will stand out in support of Canadian industrial expansion, and recognize the value and importance of agricultural knowledge, the Agricultural Societies of Ontario can do great things in a practical way towards making this country rise to its opportunities. You are already doing a grand work. Your exhibitions and fairs are great educational institutions.

"I shall never forget the great privilege I enjoyed a few years ago when called upon to report upon the progress of the Norfolk Agricultural Society at Simcoe. Although I had been as a boy a member of four different Societies in this Province, I got a new conception of the educational value of a fair. The extent to which Secretary Murphy and the directors endeavored to make the judges, provincial officers and newspapers feel "at home" was inspiring. The way Superintendent Kydd of the horse department and others with him strove to make the most of the exhibition from an educational stand point; how the wheel of fortune fakir was obliged to camp on a vacant lot far back in the town, instead of on the Society's grounds; how the professional horse race with its winners so often picked before the race begins was absent; and best of all, how the people kept coming, remaining all day, and went away seemingly satisfied and happy. All in this picture has come back to me hundreds of times in the discharge of my duties as an adviser of Agricultural Societies in Manitoba. Since that day I have learned to be a firm believer that fairs are just as useful and as educational as the directors managing them believe they can be.

"Men who are interested in the improvements of the methods of teaching agree that the eye is as important an agent as the ear. We learn to do things by seeing them done, much better than by being told merely how to do them. You teach men how to produce good horses and cattle by showing them the results of the efforts of the man of skill in the science of breeding. It is your opportunity as an exhibition association to present ideals to the people. You do this in your exhibits of grains, vegetables, fruits and other products of the farm, but you are coming to a time when you will do even more to make your fairs educational than you are doing at the present time. I say this knowing that you are aiming to make the best of your opportunities to have old Ontario stand out as a bulwark in Canadian prosperity.

"I am told that there are fairs in this Province that have not yet learned to appreciate the necessity for having a judging ring for live stock. Anyone who has judged horses knows how difficult it is to satisfy one's self, much less the exhibitors, regarding the merits of competing animals, when the crowd is allowed to gather very close. I am told, too, that hogs are exhibited where no unloading facilities are provided, the result being that they are judged in the wagons, the public having no opportunity of studying their merits. It seems to me that your Department of Agriculture would be justified in withholding a grant from such fairs.

"Then there is the much debated subject of giving reasons for placing animals. Capable judges are always ready to give some reasons to exhibitors who desire them, but it is not always thought to be fair to the man who showed and lost, to have his horse, for example, criticized for the benefit of the public, unless he knew when entering that he might be called upon to submit his animal for consideration in this way. I believe it is always possible for a capable judge to tell the ringside what would constitute an ideal in each class.

"Good judges, I know, are not always ready speakers, but a short explanation when the awards have been made in each class inspires the public with confidence in the judge. No single feature of a show can do more to increase its future patronage than the creation of a feeling among exhibitors that the judging was conscientiously and skilfully done. The giving of reasons need not apply to livestock exhibitions alone. We are certainly moving on towards a time when exhibits will become greater object lessons, and the fairs something more than the farmers' show window.

"As we look on into the future we see a spreading out, an enlarging of the fundamental functions of Agricultural Societies, viz., Education and Improvement. Your Standing Field Grain Competitions I expect to see enlarged upon until all the operations of the farm are considered. Growing choice, clean seed is only one of the important operations carried on in summer on your farms.

"In the Province of Manitoba we have held during the last two summers what we call "Good Farming Competitions," our object being to emphasize good farming by attracting attention to the farms on which the best theories of modern agriculture are being put into practice. We are strong believers in demonstration work. When we get back to the soil to consider our own weaknesses, we must all agree that one of the greatest problems of to-day is better farm management. Talk when you may with the average farmer, and you will find he knows how to do much better than he does. Many of us are very good theorists, but not nearly so good in practice. "The spirit seems willing but the flesh is weak." So we in Manitoba try by our good farming competitions to draw attention to the men who, as we say in the West, "are doing things."

"Now in any competition of this kind you are apt to assume that the man who has the best pure bred stock and the finest buildings always wins. This is not true, however. We have a very interesting score card which we try to follow in order that the man who is doing most to improve conditions can get a fair show. Perhaps the man with the pure bred stock secured the animals from someone else. Anyone who has money may go to the shows and buy good stock from among the prize winners. Money also can provide good buildings. What our judges look for in live stock, herds and flocks, is evidence of improvement. They expect to find the animals of better average quality than their dams. The man who has a good grade herd and is improving it is given the fullest consideration. Where buildings are elaborate we expect to find them modern in construction and equipment.

"In following out this score card, we often find that the farmer with a comparatively small, plain outfit of buildings in good repair with tidy yards, well cultivated fields, giving evidence of good management about the place, wins over the fellow who has nearly twice the capital invested in his plant.

"But, before concluding, I want to emphasize another good feature of the agricultural fair that should never be overlooked. It is the value of competitions. They are good for humanity. They educate men to be truer gentlemen. In a show ring, perhaps, anyone may be a winner, but it takes a gentleman to be a good loser. Is it not one of the best sights of our fairs to see a fellow who has lost big enough to congratulate the winner, with the remark, "I intend to win next time"!

"Yes, the population of Canada is increasing and must increase rapidly. Your own vast stretches of northland must fall before the woodman's axe and yield to the pioneer's plow. Hundred and thousands of young men will come from other climes to gain a knowledge of agriculture from your farms, and they will go on perhaps with your sons to see these new lands. While they are with you your fairs and your exhibitions will teach them much that should be of value to them in conquering greater Ontario.

"I rejoice as I see you stand in support of your Legislature in aiding all institutions of agricultural learning. I look with great pride to Ontario, as I see you introducing agriculture in your secondary and high schools, as I see you appreciate the advantages of learning among the agricultural classes.

"Your agricultural societies will do a noble work for the next generation in preparing our people to compete with other nations that strive with Britain in their efforts to become greatest. Let us, then, in serving the interests of our community, contribute to make this a greater country of enlightened and happy homes, a land where education is ever more free, and where agriculture is honored amongst the most dignified of occupations peculiar to it."

Do Mangels and Sugar Beets Cause Kidney and Bladder Stones in Rams?

Stockmen have long been under the impression that sugar beets and mangels when fed to breeding animals will in some way cause the formation of renal and urinary calculi, or kidney and bladder stones. In order to determine just how far such an opinion is justified, a series of experiments covering five years was carried on at the Iowa Experiment Station.

OUTLINE OF EXPERIMENTS.

During the years 1904-05 two rams were fed mangels at the rate of 6 pounds daily in addition to a ration of clover hay and one-half lb grain. As a check two other rams were fed only hay and grain. The feeding continued from January 20 to March 1. From March 1 to March 15, sugar beets were used in place of mangels, the supply of mangels having been exhausted. Subsequently all rams were turned on pasture. No ill effects were observed either during the experiment or afterwards. During the year 1905 none of these rams were fed mangels as the supply of roots rotted in the cellar. Their ration was hay, grain, and corn silage.

During the year 1906-07 two other rams were added to the experiment, making three in each lot. All rams were fed a ration of hay and oats until March 1, when the experiment of 1904 was repeated. The urine of the rams was also examined for sugar, albumin, volume, specific gravity, and solids.

One of the lambs in the lot receiving hay and grain died during this experiment. The feeding ended May 15. The five lambs then living having been confined 76 days were given the freedom of a box stall to accustom them gradually to exercise. They were then turned on pasture for the summer, and apparently remained in perfect health. In the fall one of the rams from the lot receiving mangels was slaughtered and his organs examined. They were in all respects normal and no stones were found in either kidneys or bladder.

During the year 1907-8 two ram lambs were added to the experiment to replace the one that had died and the one that had been slaughtered. The six animals were divided into three lots of two rams each. All animals were fed on a ration of 1.1 pounds of corn daily in addition to all the hay they would eat. After the first 20 days one lot was fed sugar beets in addition to the hay and grain, and, similarly, a second

lot received mangels. The roots were increased during the next 40 days to 17.6 pounds daily besides corn and some hay. The animals were fed in stalls so that the urine and feces could be collected for examination. The experiment began December 14 and ended April 9 and included examinations of feed, urine and feces. At the end of the experiment one animal from each lot was slaughtered. A small calculus was found in the kidney of the sugar beet fed ram. The kidneys of the mangel fed ram were enlarged, while the kidneys of the ram receiving hay and grain only, were normal.

Since the calcus had formed in the sugar beet fed lamb, it was decided to repeat the experiment another year and to increase the number of animals in each lot sufficiently to determine whether the formation of this calculus was accidental or could be traced to the use of roots. Therefore during the year of 1908-9, a total of 42 rams were fed as follows :

Eleven received hay and grain (check lot.)

Nine received hay, grain and corn silage.

Eleven received hay, grain and mangels.

Eleven received hay, grain and sugar beets.

The feeding began September 11 and ended April 14. On January 14, two animals from each lot except the one receiving ensilage were were placed in stalls and their feed, feces and urine were weighed and analyzed daily. On January 31 ram No 440, sugar beet fed lot, died after being sick one day. The bladder contained several calculi too large to pass through the urethra.

On February 11 ram No. 415, mangel fed lot, died after being sick two weeks. The bladder could not be examined as it was eaten by a pig that was in the yard. The kidneys were much broken down, being very soft and pliable.

On February 18 ram No 472, sugar beet fed lot, was killed after being sick two days. His bladder was ruptured, highly inflamed, and contained many small calculi.

On April 11 ram No. 11, sugar beet fed lot, died after a short illness. The bladder contained many small calculi.

Thirty-two of the remaining rams were sent on April 21, to the Agar Packing Company in Des Moines. They were slaughtered in the presence of Doctor Hugh G. Welpton, president of the Des Moines Pathological Society, who examined each carcass together with the internal organs.

The kidneys of all the hay and grain fed rams were normal. The bladders of five of them were normal while in the other four the bladders were slightly affected. The hearts of all these rams were normal as well as were the livers, gall bladders, and other organs.

Of the hay, grain and ensilage fed rams six showed all internal organs entirely normal. In one of the others the kidneys were slightly affected, while the remaining ram showed a slight affection of the bladder. All other organs were normal.

Of the eight rams receiving hay, grain and mangels, every one had bladder and kidneys more or less affected, while many of them suffered from affection of some of the other internal organs as well. The same was true of the seven rams that had been fed hay, grain and sugar beets. One of these, No. 429 showed a large number of calculi in the calyces of the kidneys.

The complete results of these slaughter tests are given in the regular edition of this bulletin, which may be obtained by writing to the director of the Experiment Station at Ames.

The four animals that had been fed in stalls, and whose feed, feces, and urine had been examined for a period of one hundred days, were slaughtered at Ames. The results were much the same as in the case of the other rams. Hay and grain fed lambs 5 to 9 had normal bladders, kidneys, hearts and gall bladders. Mangel fed ram No. 7 had an enlarged bladder and enlarged kidneys with loose capsule. The kidneys were mottled and stained, of soft texture and pale color. The heart and gall bladder were enlarged Sugar beet fed ram No. 10 showed an enlarged, ulcerated bladder; an enlarged kidney containing a small calculus; and an enlarged heart and gall bladder.

EFFECT ON DIGESTIBILITY OF DRY MATTER.

The rams receiving roots digested an average of 11.10 per cent, 12.27 per cent more of the dry matter in their ration than did the rams receiving only hay and grain.

EFFECT ON RETENTION OF DRY MATTER.

Early in this experiment we noticed that while the urine execreted by the rams receiving roots was greatly increased, the specific gravity of the urine was not correspondingly decreased. This was due to an increased elimination of solids by the increased volume of water passing through the kidneys, and the increased amount of solids and salts taken into the body. The dry matter thus eliminated by the kidneys was subtracted from the dry matter digested, and the difference was called "dry matter retained."

While mangel fed rams digested 11.10 per cent more dry matter than the dry fed animals, they retained only 3.32 per cent more. That is, they lost through the kidneys 8.47 per cent more of the dry matter taken into the body than did the the dry fed rams. In the same way the sugar beet fed rams lost 3.80 per cent more dry matter than did the dry fed rams. This increased loss of dry matter is due to the leaching effect of the increased amount of water contained in the roots.

EFFECT ON THE GAIN MADE.

The following comparison is based on the gains made in 1908-9 by the lots of nine rams each that were fed over a period of 215 days. The daily average gain by the lot receiving hay, grain and mangels was .292 pounds; by the lot receiving hay, grain and sugar beets, .291 pounds; and by the lot receiving only hay and grain.229 pounds.

EFFECT ON DRESSING PERCENTAGE.

The sugar beet fed rams dressed 5.80 per cent higher and the mangel fed rams 3.85 per cent higher than did the dry fed rams.

EFFECT ON COMPOSITION OF THE BODY.

The first influence of feeding roots on the composition of the body is to facilitate the deposition of fat in the tissues. The flesh of the mangel and sugar fed rams contained an average of 55 and 52 per cent fat respectively, against an average of 40.87 per cent contained in the flesh of the hay and grain fed animals. However, individuality plays a very great part in determining how much fat is deposited. In 1909 the carcass of dry fed ram No. 9 contained 46.64 per cent of fat, and that of sugar beet fed ram No. 7 contained exactly the same percentage. The water, ash and nitrogen were also about the same. But excluding ram No. 9 from the averages the meat of the root fed rams was much fatter and dryer than that of the dry fed, although containing less protein and less ash. The fat of the root fed rams was well interlaid between the muscles, giving the cuts a beautifully marbled appearance.

EFFECT ON ORGANS OF THE BODY.

Almost without exception the vascular system of the rams receiving sugar beets and mangels was affected. The bladders, kidneys, nearts, and gall bladders were enlarged or otherwise affected. In most of the organs and often in the muscular parts of the body there were hemmorrhages due to the breaking down of the capillaries.

EFFECT ON THE KIDNEYS.

Because of the large amount of water contained in the beets and mangels—over 90 per cent—the animals eating them execreted large amounts of urine. This urine carried with it increased amounts of salts—urea, phosphates, etc. The first apparent effect of this increased activity of the kidneys was an increase in their size. This was accompanied by a softening of the texture, paling of color, and loosening of the capsule. The kidneys were "soggy" to the extent that often with little effort they could be pinched in two between the thumb and finger. As the kidney tissue was broken down, it offered nuclei on which the phosphate salts could crystallize, forming small calculi. Many of these were too large to pass from the kidney, and were cemented together to form larger ones. Others passed into the bladder, irritating it greatly. As these stones accumulated and increased in size, they finally obstructed the urethra, thus preventing the escape of the urine. As a result the bladder became distended, highly inflamed, and was finally ruptured.

CONCLUSIONS.

1. Sugar beets and mangels favor the formation of renal and urinal calculi, or kidney and bladder stones when fed to breeding rams.

2. It is very probable that these roots have the same effect when fed to ewes or to cattle.

3. In view of the fatal results often attending the formation of these stones it would seem inadvisable to feed sugar beets and mangels to breeding animals.

4. There is no particular danger in feeding sugar beets and mangels to fattening animals, as the calculi are not likely to develop sufficiently during the fattening period to cause serious results.

Weeds.

In any locality, new weeds, like new insect pests, are from time to time making their appearance. Were the farmers to recognize these vegetable foes and to realize their possible troublesome, they would spare no pains to check their progress at the start. In most cases noxious weeds can be easily kept out if the effort is made before they get well established.

The methods of introduction are numerous. The Canada thistle, perennial sow thistle, ragwort, milk weed and dandelion are wind distributed. In seed oats it is often hard to detect the wild oats that may be present. Some weeds follow the course of streams or ditches, while burdock stickweed and common burr, get a free ride to many a station on a sheep's back. But the most common method of introduction is the weed seeds that come in our clover and grass seeds. Not one farmer out of a hundred knows a bad weed seed from a clover seed. So long as the price is right they do not care what the package may contain—and it might not be out of place to say right here that the farmer who buys any grade but the best, is only buying that many more weed seeds; it is graded and priced according to its purity.

As a rule all weeds are exhaustive of soil fertility. Many of them so choke the grain crop as to not only injure the yield of grain, but impoverish the soil as much as the crop sown. In this respect the thistle, troublesome as it is in many parts of Canada is far from being the worst offender.

A great deal was said at New Glasgow a few months ago, about Ragwort, many who are not interested, as their counties are not as yet infested with the weed, taking very little thought as to the real danger there is from this weed. With all that has been written and said about the dangers of this weed, and the enormous damage it has caused to horses and cattle and with all the efforts that have been put forth, it is still on the increase, has this past year made steady progress toward taking possession of the waste lands, and vacant farms and at the present time the weed is as far ahead if not farther than ever. It has already over-run all the eastern counties. It has appeared in Colchester County in several places. At Debert it has already gained a foothold and down the line as far as Stewiacke and Shubenacadie, showing that the railroad is the means whereby it is distributed over the province. If it is not checked, in fact completely eradicated wherever it shows, it will ere many years over-run the whole province.

The railroads should be compelled to eradicate any and every weed that grows along their tracks, terminals, and crossings. The farmers think it is not much use to cut and destroy weeds, when the highways and railways are completely infested with them.

In fact, the highways are a scandal, and are hotbeds for the growth of all kinds of pernicious weeds.

By all means let there be laws stringent enough enacted and enforced against individuals, municipalities and railway companies, or else our province will be taken possession of by the many dangerous weeds that are in our midst, and are coming from the West year by year.

A. HECTOR CUTTEN.

The Halifax Exhibition.

The 14th annual exhibition of the province of Nova Scotia opens at Halifax, September 28th to October 6th.

The prize list which has been distributed some months ago is practically the same as for last year with the addition of some extra money in the Horticultural Department.

This exhibition deserves the support of the agricultural people on the grounds that the prize list has been kept up in their behalf notwithstanding that we have not been able to make two ends meet.

When we had the Dominion Exhibition in 1906 we increased the prize list in proportion to the grant and have since kept it up to a standard far in excess of any prize list offered by a Provincial Fair east of Toronto. We take no exception to the name any fair assumes, but it is worth while for the exhibitors to read the prize money offered then draw their own conclusions.

The Commission ask of those in the agricultural and live stock interests their favorable consideration by sending in their entries before September 10th, at which date entries close.

The accommodation given to the live stock people is not to be excelled any where and the Commission ask fair treatment in the way of entries from all those engaged in these pursuits.

Entries close September 10th.

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or R. D. ROBINSON PUBLISHERS, Ltd.
SUSSEX, N. B.

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SEPTEMBER 6, 1910.

Dates of Issue.

September.....—20
October.....11—25

THE LURE OF THE FARM.

At a recent gathering of the graduates of one of the great universities in the Middle West, who reside in a large city some distance from their almmater, the question of selective courses and occupations came up for discussion. The men who discussed it were all members of the professions. Some were lawyers, some teachers and some engineers. Preliminary to a general discussion of the topic a vote was taken to indicate, if the opportunity offered, what course each man present would now select. Every man present save one expressed a choice for the agricultural course. The man who did not vote with the majority explained his position by saying that he was raised on a farm and left it thirty years ago.

The choice made by these men is not hard to analyze or understand. The college man who was in the hopeless minority had graduated from the farm before the new era in agriculture made its appearance. He knew of the advances made in the field of industry he deserted, but this knowledge had not reassured him that the hardships and unpleasant things he was familiar with as a boy had been overcome.

But these things have been overcome, at least to a very great extent. The men who have no vivid recollection of the seamy side of farm life can and do realize this fact fully. They see that the farmer has been emancipated. The education he receives now, either in college or through the dissemination of demonstrable theories and facts by means of government bulletins and agricultural papers, has enabled him to rise above the unpleasant conditions which made his life somewhat cheerless a quarter of a century ago.

With this release from drudgery has come an ability to reap a richer reward for his labors. He has learned what crops to sow and plant, what breeds of stock to raise, when to plow, how to fertilize and how to intelligently harvest and market his crops. The dairy, a few years ago a makeshift and a thing apart, has been made a joy and a source of income. Other things, the telephone, rural free delivery, good roads and good prices, have combined to make the farmer's life not only endurable, but enjoyable.

The men who made this somewhat suggestive selection of a single avocation certainly did not voice what is supposed to be but man's inordinate dislike for his own profession or occupation. Had this been all, the almost unanimous vote would not have been for agriculture. The fact is that modern processes have dignified farming and raised it up to and above the level of the ordinary professions.

MORE ATTENTION TO FARMING.

Though farming always has been, is, and must ever be the basis of the world's industrial activity, yet it has never received the attention it has merited. Most men have followed it more as a fate than a vocation. A youth of to-day, standing on the threshold of life, confronted by the momentous necessity of choosing his sphere of labor, of taking his place among the millions of competing toilers, too often turns his back on the farm and casts his lot with those who are already congesting the business and professional avenues.

Why does he leave the only field which to-day is not overcrowded for one where the laborers are many and the harvest small? The answer is not far to seek. There are two reasons. One is a prevailing notion that farming is a sort of vulgar occupation. No more false or pernicious notion could be conceived. The dignity of farm labor was recognized by the Romans and they gave to it the benefit of the best minds they procured. Romes' greatest poets sang of the beauties of rural life and her historians cronicled the wealth of her rural classes, but all feared when Rome in her hour of need called her soldiers and statemen from the plow, and they passed away before the approach of a more splendid but far less substantial age.

The second reason, that farming is unremunerative, is true only to the extent that one fails to bring to the management of his agricultural business the same degree skill of that the business man brings to the management of his business interests. Too many farmers leave everything to the seasons and soil, and acting on the consoling assurance expressed in the old adage that God takes care of the lame and the lazy, see their buildings run down and their farms run out. This class of farmers are those whom we hear forever complaining of the hardness of their lot and the unprofitableness of farming. We retain memories of these men. Their sleds were housed during the summer and fall under the open sky; their wagons were sheltered the same in winter; their mowing machines, rakes and plows were found when needed where they were last used the year before. If finally the sled broke down with a load of wood, or the cart with a load of hay, or the mowing machine gave out in the half mown field, they would invariably curse their luck. We are no belivers in luck. What is termed good luck is the result of good calculation and bad luck is the result of bad calculation. We believe if every farmer should bring to the management of his business that same degree of careful and systematic supervision that characterizes every other branch of industry today, his success would be practically assured. His returns would not of course be large, but the balance would be on the right side of the ledger. There would be no six percent mortgage to torment his peace and devour his substance. Thousands have grown rich out of his toil and thousands are still growing rich. Too long the wealth he has created has flowed into the pockets of those whose only tille rests on nothing firmer than connirance and cunning. He must take his lesson from the events transpiring in the great industrial world about him.

Education, organization and co-operation are to bring to the farmer his full share of the fruit of his labors. Much along this line has alread been done in the Maritime Provinces by the Nova Scotia Agricultural College, Farmers' Institutes and kindred societies, but much more remains to be done.

On another page of this issue will be found "Notes from the Nova Scotia Agricultural College" from the pen of its efficient Principal, Professor Cumming. The work that has already been done by the impetus given to Maritime farmers by the long and short courses at that grand institution is inesteimable. More and more of our young men are "taking hold" of the old farms and carrying on, in a systematic manner, the work that was begun by their forbears. You will find announcements re the 1909—10 courses on other pages of this issue. It is not to early to consider sending that boy of yours to the Agricultural College—its the place for him if he expects to follow an agricultural course. It may mean some sacrifice to you but think of the lasting benefit to the boy. Plan to let him attend the college this winter ; he will enthuse new life into the farm work when he returns and if you yourself can manage to spend a fortnight in January at the short courses with the boys, by all means do so, no matter whether you are seventeen or seventy you will enjoy the course and profit by its teachings.

RIDING BACKWARDS.

Did you ever enter a railway car, finding the seats all taken but a reversed one, you took that and rode backwards? How rapidly everything seemed to be leaving you! No matter how beautiful the scenery, how many flowers decked the wayside, how many sparkling brooks crossed, or how many delightful retreats glided by, you saw nothing until you had passed it. And then it hurried away, away in the distance until it was lost from sight. You were scarcely made sensible of a new beauty until it had gone by you, and you had of it only an unsatisfactory glimpse.

How many of us are thus riding backwards through life! We appreciate the beautiful things around us, and we long to enjoy them, but scarcely do we see them until them are gone. Blessings come and blessings go, but we do not recognize them until they are passed, and then our hearts are filled with a sad longing for their return. Friends surround us and would make us happy, but too often we do not know it until they, too, are gone. Then we grieve over their departure, but our tears cannot bring them back. Our eyes are turned only to the past, and the things we love are getting farther away from us. We are riding backwards.

Turn around. Face the front. Look to the future. See the beauties as they unfold themselves before you. Go forward to meet the blessings as they come, enjoy them as they go by, and treasure them in fond memories when they have passed on.

Life, indeed, is like a railway on which we are all passengers. What we get out of it depends upon how we are riding. Let us keep our eyes to the front, and be prepared to meet our friends as they approaeh us, to greet them with smiles of recognization and appreciation, to give kindness in return for the kindness they have in store for us, and thus gather flowers on the journey rather than see none but what are already rushing beyond our reach. The past may be sacred as it is held in memory's strong casket, and we may turn our heads sometime to gaze upon it fondly but the future is Hope's fruitful garden in which God has planted sweet flowers to perfume and make glad our passing way.

Look ahead to see the blessings,
Never back to bring a sigh ;
Life's great train is hastening onward,
Hope and Heaven are drawing nigh.

IN FAIRNESS.

Mention this journal in writing our advertisers. We have rendered service in bringing you and an honorable dealer in touch. You receive value ; he receives value ; let us have credit for our part.

EDITORIAL NOTE.

The farmer without a good pasture, surrounded by a reliable fence, close to the buildings, is incomplete. Such a field need not be large, but it will be of great value to turn work horses into over night and in many other ways.

Notes From the Nova Scotia Agricultural College.

The next session at the Agricultural College, Truro, N. S., will open on November 1st, 1910. The attendance at the college has been steadily growing, but it is not yet commensurate with either the equipment of the institution or the importance of the agricultural industry in the Maritime Provinces. Have you ever thought of attending the college yourself or, if you are a parent, have you ever thought of sending your boy? Consider some of the advantages.

1.—The college affords an agricultural education. The student will learn the constituents of soils and plants and, hence, the principles which should guide him in his farm practice, the constituents of manures and fertilizers and how to mix and apply these intelligently, the use of farm machinery, how to judge select, care for, and make profitable all kinds of farm stock, the treatment of animals in disease and how to perform veterinary operations, the principles and practice of fruit growing, dairying, poultry, carpentry, blacksmithing, etc.

2. In addition, students will study English, Arithmetic, Bookkeeping, and such other subjects as are taken up in the general High School and College courses.

3. No tuition is charged. Board will average $3.50 per week for 22 weeks. Books, $10.00 to $15.00. These, with railway fare, are all the necessary expenses. Any industrious student can earn on the farm from $15.00 to $25.00 during the term. We do not know of any institution in Canada where an education can be obtained at less cost.

4. The term is from Nov. 1st to April 15th, the least busy season in the year.

5. Most of the students return to their farms. A few go on and prepare themselves for professional work. Those who have graduated from the Nova Scotia Agricultural College and studied at Guelph and other institutions have, almost invariably, stood at the top of their classes and are unanimous in stating the advantages of a course at the N. S. A. C.

6. Agriculture is much more remunerative than formerly, but competition is becoming all the keener. The 20th century farmer, if he is to succeed, cannot afford to be without a better education along agricultural lines than his father had. Surely the boy who will devote his life to agriculture can be afforded from the farm during two short winter terms, during which to acquire a better knowledge of his life's profession so that, as a citizen, he can hold his own with men of other professions.

7. The college is equally free and available to students from all the Maritime Provinces, as well as to those from abroad who purpose settling in these provinces.

Send a letter or post card to the undersigned and get fuller information in regard to the courses.

(Signed)
M. CUMMING,
Principal Agricultural College.

Prince Edward Island Crop Report

The following is the report of the crops and the conditions of the live stock in Prince Edward Island under date of July 25th, 1910.

Hay.—The hay crop this year is excellent, both in quantity and quality. The clover crop came through the winter without injury, but received a severe freezing on the nights of June 4th, and 5th, from the effects of which it did not fully recover. The timothy is very long and fine weather will now make the hay crop one of the best ever gathered in the Province.

Wheat.—The outlook for the wheat crop is good. Last year several correspondents reported that the Joint Worm could be avoided by late seeding, but this year several reports say that the Joint Worm is doing injury even in fields sown on June 7th. It is too early to estimate the damage likely to be done by it.

Oats.—The reports of the oat crop runs from 65 per cent. to 150 per cent. There has been too much rain for the lower-lying, heavy soils, particularly in the Western part of Prince County, but the crops never looked better on the dry, light lands. At this time of year the crop has seldom looked better.

Barley.—Except where sown in rather low land, the barley is excellent. Sixty-eight correspondents have reported this year on this crop, a considerable increase over former years.

Peas.—Peas are grown almost altogether for soiling purposes, or to be cut green and made into hay for winter feed for cattle. They are sown with oats at the rate of 2 bushels oats and 1 bushel peas per acre. The growth up to the present time is much above average.

Corn.—Fifty correspondents have this year reported on corn. By the of June it looked as if the crop would be a complete failure. The warm weather in July however, brought it on very rapidly, but up to the present time it is much below average.

Potatoes.—There seems to have been a considerable miss in the crop this year, particularly in Western Prince, but no cause is assigned by any correspondent. The potato beetles are more abundant in sections than they have ever been before, and there is no doubt but that the crop will be reduced on account of them.

Roots.—With a few exceptions the prospect for the root crop is excellent. In some cases a second seeding was necessary, but the weather has been so favorable that this is not likely to lessen the yield.

Fruit.—The frosts of June 4th and 5th, did very much injury to the fruit crop. There will be very few early apples this year and only about half a crop of fall and winter varieties. Plums will also be very scarce and cherries are almost a failure. Strawberries were about a 65 per cent. crop, gooseberries 60 per cent., currants a little better, and blueberries are reported as likely to be scarce. More interest is being taken in spraying and orchards are better cared for in general. A few new orchards are being planted, and the growing of strawberries is becoming more general.

Pastures.—The pastures never were better. Cattle were turned out about two weeks earlier than usual. Frequent showers have kept the grass green and the prospect is that little soiling will need to be done till late in August. The prospects for fall and winter feed are much better than usul.

Dairy.—Reports received from 32 factories and creameries show an increase of about 23 per cent. in the amount of milk received this year over that received last year up to July 15th, while the increase in the number of patrons is less than 2 per cent. and in the number of milch cows about 5 per cent. The increase is due mainly to better feed and better care of cattle. There seems to be some improvement in the quality of the milk although one factory reports returning 3000 lbs. of milk on Monday, July 11th. The price of milch cows has increased about 12 per cent.

Eggs—Reports show an increase of about 19 per cent. in Kings County, 8 per cent. in Queens County and 21 per cent. in Prince County.

Farm Help.—The supply of farm labor is not as scarce as it was last year. Two correspondents report it sufficient for every one that reports it scarce. The wages (with board) paid are as follows:

	Prince County.	
	Per Day.	Per Mos.
Lowest reported	$ .65	$13.00
Highest reported	1.50	18.00
Average reported	.94	16.00
	Queens County.	
	Per Day.	Per Mos.
Lowest reported	$ .75	$14.00
Highest reported	1.40	20.00
Average reported	.93	18.00
	Kings County.	
	Per Day.	Per Mos.
Lowest reported	$ .75	$10.00
Highest reported	1.25	18.00
Average reported	.86	13.00

There is an advance of about 5 per cent. in the cost of labor over 1909.

Weeds.—Some of the worst weeds, particularly Tansy Ragwort, Orange Hawkweed and Wild Mustard are spreading rapidly. In the new meadows there is an abundance of Night Flowering Catchfly and some Bladder Campion, Rib Grass and Curled Dock. Yarrow and Mouse-ear Chickweed are doing considerable damage and Sow Thistle is taking a heavy toll from the grain crops. Six weeds reported by the largest number of correspondents are Ox-Eye Daisy, Canada Thistle, Sow Thistle, Yarrow, Wild Mustard and Night Flowering Catchfly. The following are also reported: Daisy Fleabane, Couch Grass, Mouse Ear Hawkweed, Evening Primrose, False Flax, Black Eyed Susan, Green Fox Tail, Ball Mustard, and Chicory.

LIVE STOCK.

During the month of June, 1907, a census of live stock of the Province was taken and the results were as follows:

	Prince County.
Milch Cows	x 16,798
Other Cattle	x 18,608
Horses	x 11,094
Sheep	x 25,087
Pigs	x 14,355
Geese	—.....
Hens	x .....
	Queens County.
Milch Cows	x 16,741
Other Cattle	—19,773
Horses	x 12,363
Sheep	x 26,089
Pigs	x 20,035
Geese	—.....
Hens	—.....
	Kings County.
Milch Cows	x 12,011
Other Cattle	x 10,614
Horses	— 6,978
Sheep	x 20,285
Pigs	—10,777
Geese	—.....
Hens —	x .....
Increase x	
Decrease —	

If the number of each for 1907 be represented by 100, the number of each for 1910, will be represented as follows.

Counties.	Turkeys	Geese.	Hens.	Pigs.	Sheep	Other Cattle.	Milch Cows.	Horses.
Kings—1908	87	97	110	95	102	102	-	97
" 1909	74	85	116	91	101	101	102	99
" 1910	70	—	—	—	—	106	—	—
Queens—1908	93	98	104	91	100	100	101	101
" 1909	83	98	106	90	103	101	108	102
" 1910	67	—	—	—	—	—	—	—
Prince—1908	89	98	101	98	102	100	102	102
" 1909	80	93	101	95	108	103	104	104
" 1910	68	—	—	103	—	—	—	—

Enumeration of Census Values.

The farm and urban values of the census of 1911 will be enumerated under the date of 1st June. They will include the real estate and live stock values of each enumeration district at that date, of the live stock and nursery stock sold in 1910, of the dairy products consumed at home, sent to factories or sold, and of the animals slaughtered on the farm in the same year, together with values of other products of the farm.

Land and buildings and farm implements and machinery owned by every person in the enumeration district will be recorded separately for values in 1911, and the rent of land and buildings will also be recorded if leased in that year. Values will be taken for orchard fruits, small fruits and vegetables separately for 1910; but values of horses, milch cows, other horned or neat cattle, sheep, swine, poultry and hives of bees will be taken separately for 1911, at the date of the Census.

The values of live stock and nursery stock sold in 1910 will include horses, milch cows, other horned or neat cattle, sheep, swine, poultry and hives of bees, and of nursery stock, which means fruit and ornamental trees grown for transplanting into orchards, gardens and parks.

Dairy products consumed on the farm, and sent to factories or sold, refer to products of the year 1910. They include the values of milk, cream, home-made butter and home-made cheese.

Animals slaughtered on the farm in 1910 will be recorded for the value of horned or neat cattle, sheep, swine and poultry. Horses are not included in these values, as in our country their meats are not used for food.

The values of other products of the farm include those of eggs, honey and wax for 1910, and wool, maple sugar and maple syrup for 1911.

The enumeration of hired labor on the farm refers to the year 1910. It will give the total number of weeks of labor employed, which means the number for all men who work for hire on the farm, and the total amount paid for hire, including allowance for board. The payment should be reckoned for the full time of service, and should include the value of board. The inquiry relating to earnings for domestic service is asked for in Schedule No. 1.

In addition to the foregoing inquiries of values, a question is asked for the value of all lands and buildings not manufacturing establishments or mines owned in Canada in 1911 which are outside of the enumerator's district.

A country teacher of my acquaintance asked a nurseryman whose son was in her school to talk to the pupils about the subject of budding and grafting. The man brought his knife and several young trees and actually set buds and coins, while the children crowded around breathless with live interest, listening attentively to his descriptions, and even trying a hand at the work themselves while the man directed them. Never was there a better nature lesson. Many teachers can follow this suggestion.—Selected.

HORTICULTURE

The Greatest Fruit Show Ever Held in New Brunswick Will be Held Next November.

New Brunswick fruit growers are again reminded of the big fruit show which is going to be held in St. John, N. B., early in November of this year. An opportunity is to be given to all New Brunswick fruit growers to come forward with their exhibits and show what their province can produce in the fruit line. The show will be held under the auspices of the New Brunswick Fruit Growers' Association, and the Provincial Government has granted five hundred dollars in prizes to be awarded as follows:

CLASS I.

(Open to all New Brunswick.)

Sub-Class A..

Best plate of five apples.— McIntosh Red, $3.00, 2.50, 2.25, 1.75, 1.50, 1.25, 1.00, 75c.; New Brunswicker, $2.50, 2.00, 1.50, 1.00, for each variety. Bethel, Alexander, Wolfe River, Fameuse, Dudley's Winter, Milwaukee, Duchess and Wealthy.

Sub-Class B.

Golden Russet, King of Tompkins, Northern Spy, R. I. Greening, Bishop Pippin, Talman Sweet and Ben Davis, $1.50, 1.25, 75c. for each variety.

Sub-Class C.

Princess Louise, Gravenstein, Ribston, Blenheim Pippin, Maiden's Blush, Grime's Golden, Gano, Stark, Baxter, Arctic, Wagner, Fallowater, Roxbury Russett, Ontario, Salome, Winter St. Lawrence, Milding, American Baldwin, Canada Baldwin, MacMahon's White, Rolfe, Scott's Winter, N. W. Greening, Tefosky, Blue Pearmain, Cox's Orange, Longfield, Crimson Beauty and any other variety, $1.00, 75c, 50c. for each variety.

CRAB APPLES—Best plate of 12.

Sub-Class D.

Transcendent, Hyslop, Whitney, Martha and any other variety, $1.00, 75c. and 50c. for each variety.

CLASS II.

Sub-Class A.

Best plate of five apples. For competition by growers of only Sunbury, Queens, Kings and Albert Counties.

Northern Spy, King of Tompkins, Bishop Pippin, Golden Russet, Ben Davis, Blenheim Pippin, Gravenstein and R. I. Greening, $1.50, 1.25, and 1.00 for each variety.

Sub-Class B.

For competition only by growers in Carleton, York, Charlotte, Westmorland and Kent counties.

Alexander, Wolfe River, Fameuse, McIntosh Red, Dudley's Winter, Milwaukee, Bishop Pippin and any other variety, $1.50, 1.25 and 1.00 for each variety.

Sub-Class C.

For competition only by growers in Madawaska, Restigouche, Gloucester, Northumberland, Victoria and St. John counties.

Duchess, Wealthy, Alexander, Wolfe River, Dudley's Winter, Fameuse, McIntosh Red and Talman Sweet, $1.50, 1.25 and 1.00 for each variety.

CLASS III.

Collection of Apples, not less than five varieties, exhibited by growers, $3.00, 2.00 and 1.00, for every county in New Brunswick.

CLASS IV.

Apples.

Best 10 varieties grown in New Brunswick, 5 specimens of each, $6.50, 5.00, 4.00, 3.00 and 2.00.

CLASS V.

Sweepstakes.

Best collection of apples grown on any one farm in N. B. Exhibitors in this class must be prepared to make affidavit that all the specimens shown were grown on their own farms, $5.00, 3.00 and 2.00.

CLASS VI.—A.

Export Varieties.

Barrels ready for shipment, $4.00, 3.00, 2.00, and 1.00; Boxes, ready for shipment, $4.00, 3.00, 2.00 and 1.00.

CLASS VI.—B.

Domestic Varieties.

Barrels, ready for shipment, $4.00, 3.00, 2.00 and 1.00; Boxes, ready for shipment, $4.00, 3.00, 2.00 and 1.00.

CLASS VII.

Pears.

Flemish Beauty, Clapp's Favorite, Duchess, Bartlett and any other variety, $1.50, 1.25 and 75c. for each variety.

CLASS VIII.

Bog Cranberries.

Best callection, named varieties, one quart each, $1.25, 1.00 and 75c.

CLASS IX.

Fruits preserved for table use in 1 quart glass jars of each.

Strawberries, Raspberries, Cherries, Currants, Gooseberries, Blueberries, Plums, Blackberries, Pears, Crab Apples, any other Preserve, 1st prize, $1.00; 2nd, 50c. in each case.

Best collection preserved fruits, 8 varieties, no more or less, $2.00, 1.50 and 1.00.

CLASS X.

Fruit Jellies.

In glass jelly jars, one jar of each. Currant, Crab Apple, Apple, Cranberry, Plum and any other variety, $1.00, 75c. and 50c. for each variety.

CLASS XI.

Best collection of Fruit bottled for exhibition purposes.

Strawberries, Raspberries, Blackberries, B. Currants, R. Currants, W. Currants, Cherries, Plums and Crab Apples—Apples and Pears excluded, $10.00, 8.00 and 7.00.

Special advice re bottling and the best solution to be used for the preservation of each kind of fruit will be furnished on application, by the Provincial Horticulturist, in care of the Department of Agriculture, Fredericton, N. B.; and the Department will furnish free of cost to New Brunswick growers, special jars made for this purpose on condition that the jars with their contents become the property of the Department after the award of prizes.

SPECIAL COUNTRY PRIZES

A number of public spirited persons in your county are donating prizes to the extent of from one hundred to one hundred and fifty dollars, competition to be limited to the county, and you are urgently invited to avail yourself of this additional opportunity and to contribute to a large and excellent display from your county. The complete prize list with rules, regulations and entry forms will be sent you as* as soon as the details are completed.

HOW TO GROW EXHIBITION FRUIT.

In a well pruned, well sprayed, well fertilized and cultivated orchard a large percentage of the fruit will be fit for exhibition purposes, but in an unpruned, unfertilized and sod-bound orchard it is indeed hard to find specimens sufficiently large and at the same time free from blemishes which would mar their chances of success on an exhibition table.

Unfortunately most of the orchards belong to the latter class, but by putting into practice the following directions we may obtain exhibition fruit and at the same time prove to ourselves the advantages of modern orchard practice and thus take a step leading to a better all-round care of our orchards.

Where possible plough under the sod after first putting a good dressing of barnyard manure on it and follow directions given in Bulletin II. for renovating old orchards. If the orchard must remain in sod the desirable effect of cultivation may be largely obtained by a heavy mulch of barnyard manure. Now take the thriftiest, best thinned out and most productive tree of the required varieties. If it is a variety that scabs badly spray the whole tree or that half of it exposed to the most sunlight just before the leaf buds burst with Bordeaux mixture as per Bulletin II. Spray again for the codling worm when most of the blossoms have fallen, also as per Bulletin II. When the apples have reached the size of a small crab thin out on the best branches to six inches apart, taking particular care to remove the smaller apples and those with scab spots, worm holes or blemishes of any sort.

If when you decide to get exhibition fruit it is too late to spray or you have nothing to spray with, by selecting a tree with a good set of fruit and thinning out the branches on the sunny side and then removing the blemished and inferior apples, leaving the remaining ones a good distance apart, we admit the sunshine and air and throw all the sap flow into the complete nourishment of a few large apples instead of the incomplete nourishment of many small ones. Thus we are enabled to grow a few large, clean, well colored specimens for exhibition even without spraying, although it must be remembered that spraying will greatly increase our chances of success and the number of clean apples.

By following these directions you will obtain results that will cause you to work your ground, thin out all your trees and spray thoroughly the next year because you will have very striking evidence that it pays better to grow a bushel of large, clean, well colored apples than a barrel of under-sized, green, scabby and wormy fruit.

What the membership fee of one dollar to The New Brunswick Fruit Growers' Association entitles you to.

1. To twelve free entries at the Fruit Exhibition to be held in St. John before the close of navigation on the St. John River, probably in the first week in November. At this show $500.00 in premiums is being awarded by the Provincial Government. Additional special donations from private persons in each county to the extent of $700.00 are being offered making a grand total of $1200.00 in prize money.

2. To extra entries over twelve at the rate of ten cents each.

3. To free admission to the three days series of addresses and demonstrations on various phases of fruit growing by the best experts obtainable, which series will be held in conjunction with the exhibition.

4. To receive regularly all horticultural publications from the Department of Agriculture at Fredicton, N. B., and a copy of the annual report of the Association.

By becoming a member of the New Brunswick Fruit Growers' Association you will be afforded the following opportunities:

1. To meet individually and collectively the best fruit growers in the province, men with whom you have a kindred interest. The opportunity thus afforded of exchanging ideas and experiences should prove of great value to you, as the most successful fruit growers in Canada today attribute their success in a large measure to constant association with their fellow growers.

2. United we stand—divided we fall. As individuals your powers are limited. As members of a large, enthusiastic and energetic Fruit Growers' Association you will be able to command the attention and respect of the government to procure their aid in redressing your grievances, in enacting legislation to safeguard and further your interests, and in developing the fruit growing industry of the province.

3. By co-operating with your fellow fruit growers greater facilities will be afforded you of obtaining all necessary supplies at a minimum cost—better and cheaper nursery stock, spraying appliances and materials may be procured—and increased attention and respect commanded from transportation companies, commission merchants and apple dealers.

Scale of points for judging fruit proposed by the Fruit Growers' Association of Nova Scotia, 1909.

This Score Card will probably be uniformly adopted throughout the Dominion and constitutes the standard upon which the prizes at the St. John November exhibition will be awarded.

ed.

Score Card for Single Plates Named.

Points.	
25.	Freedom from Blemish.
25.	Color.
20.	Uniformity.
15.	Form.
15.	Size.
100.	

Score Card for Collections.

Points.	
20.	Freedom from Blemish.
15.	Color.
10.	Uniformity.
10.	Form.
10.	Size.
10.	Commercial Value.
10.	Quality.
10.	Nomenclature.
5.	Arrangement.
100.	

EXPLANATION OF TERMS.

Freedom from Blemish.—Any injury by Insects, Fungus, Bruises, Loss of Stem or other cause, lessening the value or appearance of the exhibit, may be called a Blemish.

Color.—Bright, clear well developed color, characteristic of the variety preferred.

Form.—Represents the perfect or normal type of the variety.

Uniformity.—Specimens should be as nearly alike in size, form and color as possible.

Size.—Indicates care and skill in production, and usually, other points being equal, size wins.

Commercial Value. — Standard, known market varieties, as grown in and suited to the district, preferred.

Quality.—To be considered in collections, Seedlings, new varieties on trial, or other sorts in competition.

Nomenclature. — Exhibits must be correctly named according to the nomenclature adopted by the Society, Association or Exhibition at which they are shown.

Arrangement.—Taste and skill in staging so as to attract attention and add to the general appearance of the exhibit.

Let your watchword be "lets exhibit our fruit at the greatest fruit show ever held in New Brunswick, thus show to the world New Brunswick can grow high quality apples, of good keeping quality for local and foreign consumption."

The Raspberry.

The English garden varieties of the raspberry have all originated from "Rubus Idaeus," a native of Europe

rst found on Mount Ida, in Crete, ence the name. The wild red raspberry, "Rubus Strigosus," is common on this continent from Virginia north. The berries are smaller, but the flavor is much finer than the European berry, of which the best is the "Red Antwerp." Cultivation and hybridization have given us many new varieties. The best of the earlier ones introduced was "Brinckle's Orange."

Of all the newer varieties, none has stood the test of time like the "Cuthbert." Introduced in 1876, it has been grown successfully in every place where raspberries can be grown. It has proved itself an abundant bearer of good flavored fruit, large and firm, and for distant shipment it has no equal. A more recent introduction is the "Herbert" a very promising berry, but not sufficiently tried to speak knowingly about.

The fruit of the raspberry is much sought after, and its uses are numerous. It is fragrant, subacid, cooling and agreeable to the taste. The juice is useful in fevers, but its principal use is to make jam.

THE CULTIVATION OF THE RASPBERRY.

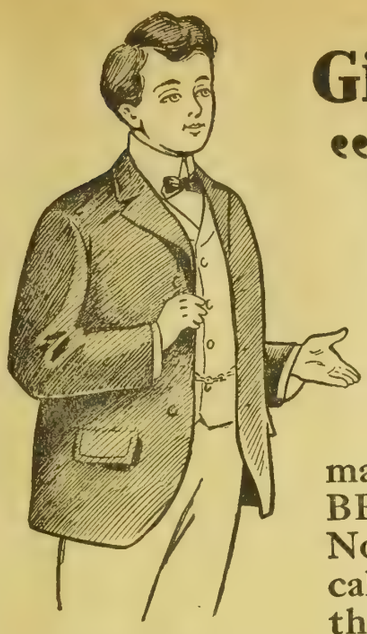
The land should be free from stumps, roots and stones; it should be cultivated as deeply as possible. It will pay to subsoil land to be planted with the raspberry. It is hardly possible to make the ground too rich. The raspberry succeeds best in a loose, loamy, moist soil, but not wet. It should be planted in hills five feet apart each way, three plants to a hill, or in rows six feet apart, and two feet apart in the row. The first plan requires 3,484 plants to the acre, and the second, 3,630. After planting, the ground must be kept clean and free from weeds, and the sucker plants not required for next year's canes must be cut off, thus throwing all the strength into the remaining plants. Never use the plow or cultivate deeply. If you will dig up a raspberry plant you will see the reason for this. The roots are of a twofold nature, the woody roots feeding the plant and going deep into the ground, while the fine fibrous roots which maintain the fruit are always quite near the surface. Plowing or deep cultivation destroys these roots, and thus reduces the crop. Deep mulching has been found to give excellent results. In the fall the old canes should be cut out and burned.

When danger of hard frost is past in the spring, the fruiting canes should be cut back to about four feet. This causes laterals to be put out, increasing the fruit-bearing wood. If the hill system has been adopted, no staking is required, except in localities where high winds prevail. Simply tie the tops together.

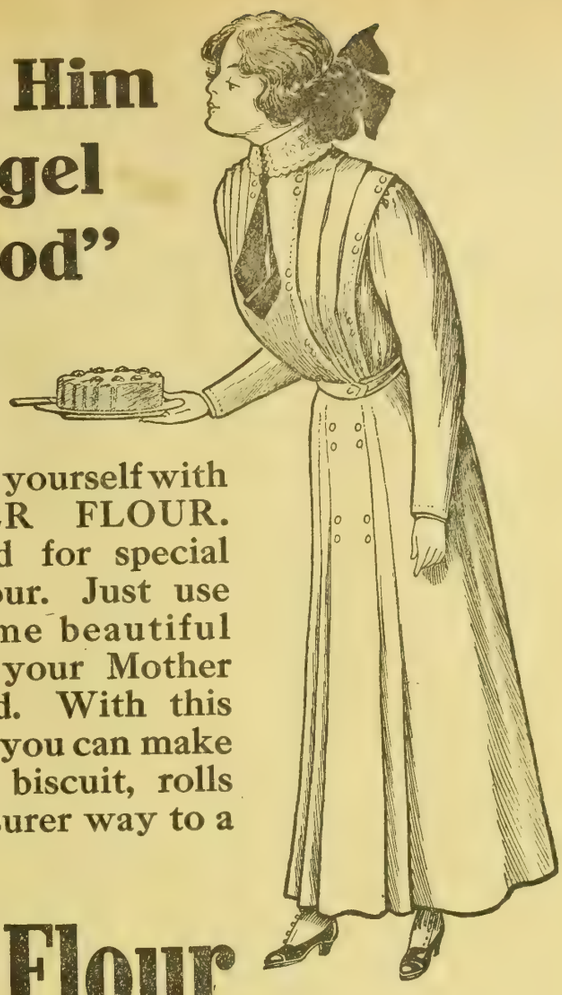
When planted in rows, two wires should be stretched one foot apart, on the same level, with a heavy post at each end, and lighter ones every rod, to which crosspieces are nailed to carry the wires. The vines are trained between the wires and the wires tied together every five feet. The average crop should be 450 crates of 24 pounds. The plants should produce a full crop the third year, and if fertility of soil is maintained, the plantation will be profitable for ten or twelve years, or even longer.

Of all the small fruits, I believe the raspberry to be the most profitable, but it must be planted on suitable soil and receive proper care at the right time.

Prices are renumerative, and will continue to be so. The demand on the prairies and in our cities and towns is increasing much faster than our plantings.—W. J. Brandrith.



Give Him "Angel Food"



made by yourself with BEAVER FLOUR. No need for special cake flour. Just use that same beautiful white flour with which your Mother makes such perfect bread. With this famous BEAVER FLOUR, you can make the most delicious cake, biscuit, rolls and pastry. There is no surer way to a man's heart.

"Beaver" Flour

is made from the finest wheat that can be grown, being a scientific blend of Ontario Fall Wheat and Manitoba Spring Wheat. In this way, we secure a flour that makes not only more wholesome and nutritious cake and pastry, but more delicate and appetizing bread. For both uses, BEAVER FLOUR is unrivalled.

DEALERS—Write for prices on Feed, Coarse Grains and Cereals.

THE T. H. TAYLOR CO. LIMITED, - 104 - **CHATHAM, Ont.**

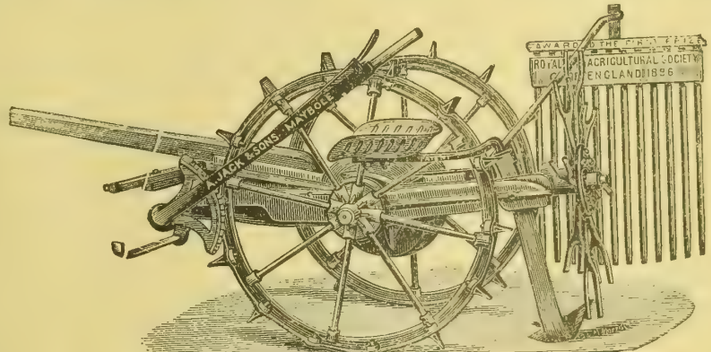
THE WORLD'S BEST POTATO DIGGER

Jack's Royal First Prize

New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position for Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, Canadian Agents, - - - Port Williams, N. S.

LIVE STOCK.

Scrubs Not All Without Pedigrees

Somehow there seems to be a prevailing idea that scrub animals consist only of those without pedigrees. A lot of our native cattle that have no particular kind of pedigree are much less worthily termed scrubs than might be many of the "well bred" ones that have pedigrees extending well back to the "dawn of creation." Pedigrees and good breeding are most desirable but we want the pedigree to mean more than a tabulation of ancestry on a piece of paper. If the pedigree mean performance, well and good, otherwise not. When we read over the pedigree of a stallion we can tell what his ancestors were and we have an idea of what he may become by the records of his progenitors. The same is true of other classes of live stock. We want the beef cow to raise calves that will take on fat quickly and profitably, the dairy cow should put in her time making milk, we want the bacon hog to produce profitable feeding pigs of the right type and the sheep also to approach perfection in production after its kind. We prefer to have these with a pedigree because their ancestors have been consistently bred along definite lines. But a miserable animal with a pedigree is just as worthy of the appellation of "scrub" as the animal of no particular breeding. "Handsome is as handsome does," and that is the way with pedigrees. The purely bred animal, though, has some merit aside from her individual qualities. She has a "bred in" prepotency which will show itself in her progeny. A poor individual of good ancestory is perhaps better than a poor individaul of no particular breeding. There is no place for either on western farms. A scrub is a scrub whether it has papers or not. Most any day a trip to the stock yards will show a bunch of "retired" bulls that make one feel tired and then re-tired to look at them. They were perhaps scrubs to begin with, but they had papers and were used on the range or farm just as long as they could get a cow in calf. There are a lot of people who cover up their meannesses by a good family name. But they are "scrubs" just the same. And papers and characters of ancestors will not cover up defects in live stock any more than they will in people. Birth and breed cannot be made the test of "scrubbiness." Scrubs may be found in all breeds and the greatest function of the breeders is to get rid of them as quickly as possible. We might say to every critter on the farm: "Act well your part, there all the honor lies."

Bloat in Cattle.

Bloat in cattle is due to an accumulation of gas in the paunch. This gas is produced by the rapid action of gas producing bacteria swallowed on the food. When the quality becomes excessive the organ is distended to such an extent that the left side of the abdomen projects far beyond its natural size. On pressure the presence of the gas is easily detected. The symptoms are quite characteristic of the condition, and so familiar to all who handle cattle that they need not be enumerated here. Treatment is usually satisfactory when begun in time. If the case is severe, no time should be lost in allowing the escape of the gas by means of a trocar and canula. Tap on the left side in the middle of the triangle formed by the last rib, the lateral spines of the backbone, and the point of the hip bone. Direct the point of the instrument towards the shoulder joint of the right leg. The canula may be left in position for several hours, or until no more gas forms. When the canula is removed, evacuate the bowels by giving the cow of average size a drench of one pound of epsom salts and an ounce of ginger dissolved in a quart of water. If the condition is not serious enough to make tapping necessary, give 4-ounce doses of hyposulphite of soda, every half hour until six doses have been given. Good results may sometimes be obtained in mild cases by placing a piece of rope in the animals mouth, like a bit, and tying the ends on top of the head. If the part in the mouth is covered with pine tar, the animal will try to spit it out and in doing so will cause the evacuation of part of the gas through the mouth. Prevent bloat by feeding hay or turning on dry pasture until the cattle are well filled before turning on succulent pasture. Allow the cattle to become accustomed to new pasture gradually. It is not wise to turn them in clover or alfalfa pasture when it is wet with dew, rain or frost. Prevention is better than cure.—Dr. C. C. Lipp.

Dairy Calves After Milk Stage.

When the skim milk diet of the calf is stopped any time from six to 12 months of age, it should be remembered that the calf is deprived of a nitrogenous feed and its place should be taken by some nitrogenous grain or roughage. The tendency of the dairy calf to get too fat depends not only upon its temperament but also upon its feed. Avoid

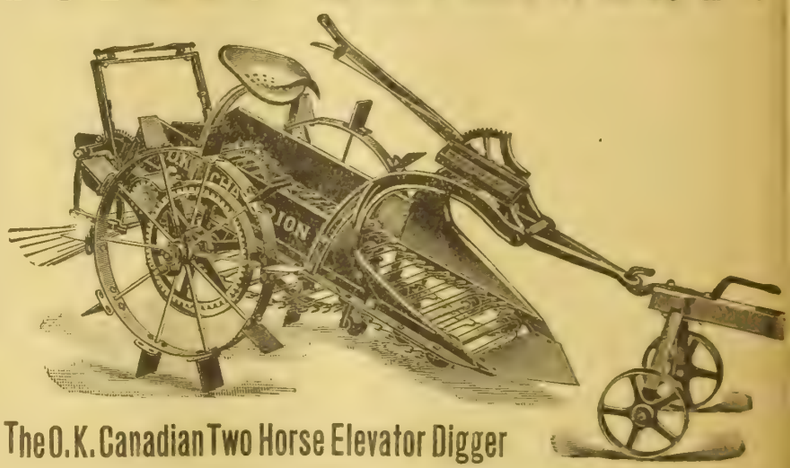
Farmer Agents Wanted

We want a farmer in every locality to act as our representative. No experience necessary. No financial obligations to be met before starting to draw your commission. All notes, etc., are looked after by us.

District representative will call and instruct. Every assistance given in making a sale. The **Empire Cream Separator** is the easiest to clean, easiest to turn and easiest to sell of any separator on the market. A card or letter written us to-day will be attended to at once. After planting and harvesting, you will have a breathing spell—why not make a few dollars? No loss of time from your farm work, no investment, no travel, and no fault finding after machine has been placed. No better proposition has ever been offered you. Write to-day.

The Empire Cream Separator Company of Canada, Limited,
SUSSEX, New Brunswick.

POTATO MACHINERY!



The O. K. Canadian Two Horse Elevator Digger

will dig your crop and do it well. If you are in need of a Digger, you can do no better. than secure one of our machines.
Write for our illustrated Catalogue and Prices.

Canadian Potato Machinery Co., Limited
GALT, - - - - - - ONTARIO.

IMPORTANT NOTICE!

You cannot afford to be without one of our **"London"** gas or gasoline engines to do that pumping, sawing, grinding or any other work you are doing by hand or giving out.

Let us tell you about, or refer you direct to some of our satisfied customers. Our Catalogue 18G explains. 1½, 2½, 3½ and 5 H. P.

London Gas Power Co., Limited, London, Canada
Formerly Scott Machine Co., Limited.

too much corn. For grain, oats and barley are good; for roughage, bright clover or alfalfa hay with corn silage to give succulence and variety. The aim should be to keep the calf in a healthy, thrifty and growing condition. Under proper treatment the calf should continue to grow until four to six years old.

Every effort should be made to develop a large stomach and consequently large capacity; build muscle and good bone, but do not allow it to get too fat. The good dairy cow must handle large amounts of feeds. This she should learn to do while young. For this purpose roughage exercises the digestive apparatus more than concentrates. There are some who think that with a good quality of clover or alfalfa with corn silage or roots for succulence, no grain is neccessary from the time the calf is weaned from skim milk until she drops her first calf. There are others, however, and probably these include the larger number of our progressive dairymen, who think a little grain should be given daily to keep her stomach accustomed to handling grain.

Size depends much upon heredity, but even more upon liberal and judicious feeding. It is impossible to starve good dairy qualities into a growing heifer, but many a promising heifer has been starved into a poor cow.—D. H. OTIS, Madison, Wis.

Demand For Mature Mutton Sheep Lessening.

Yearlings are used to substitute for lambs in the meat trade. The ability to substitute in this way depends upon weight, quality, condition and immaturity, an index for grading sheep in this class is the "breakjoint" which is found immediately above the pastern joint. It disappears when the sheep become mature, and a sheep that does not have it cannot be classed as a yearling. It shows in the live animal as a bony-like prominence just above the pastern joint. The yearling class is composed exculusively of wethers, because the the "break-joint" disappears in ewes at about the time they pass out of the lamb class. Wethers are called yearlings until they are too far advanced to "break" as the dealer calls the "break-joint," which enables the leg to be broken easily because of this structure. The grades of yearlings are:—Prime, choice and good, and are determined in about the same way that the grades for lambs are determined. To grade as primes, yearlings must be highly developed in form, quality and condition and of a light, handy weight, which ranges from 70 to 90 pounds.

Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 15th, 1910.

Charlottetown Exhibition, September 19th to 23th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Full course at the Nova Scotia Agricultural College, Truro, N. S., begins November 1st, 1910.

Short courses at the Nova Scotia Agricultural College begins January 3rd, 1911.

Ladies Short Courses at the Nova Scotia Agricultural College, begins January 4th, 1911.

The NovaScotia Horticultural Society, Windsor, N. S., October 11th, 12th and 13th, 1910.

The Westmorland Poultry and Pet Stock show, Moncton, N. B., February 9th, 10th and 11th, 1911.

A BETTER INVESTMENT THAN YOUR VERY BEST COW

YOUR best cow is unquestionably a big money-maker. Yet an I H C Cream Harvester will pay you even bigger dividends. That is a startling statement—but true.

And being true—it is a wise move to sell an ordinary cow—and buy an I H C Cream Harvester with the proceeds. It is equivalent to trading an ordinary cow for a champion. For no cow pays as big a profit on the investment as an I H C Cream Harvester—and no cow can pay dividends for so long a time.

You must also remember that a poor separator is a bigger loss than having none at all. For a poor separator means hard work, annoyance, and poor cream. You should be careful to choose a good separator when you buy. The little extra cost should not concern you. A good separator must of necessity cost more than a poor one, because it costs more to make and is worth more.

There are so many cream separators on the market, that you will do well to take no risk. Choose an I H C. Then you will be sure of getting all the profits that a good separator means. You will be sure of getting a machine that skims to a trace—a machine that is famous for its remarkable simplicity—its easy turning, and its easy skimming features. You will be sure to get a machine that is strong and durable—one that will pay big dividends for a lifetime.

There is a wide choice for you in the I H C line. You can get just the size and style that suits you best. The Bluebell is a gear-drive machine—the Dairymaid chain drive. Each style is made in four sizes.

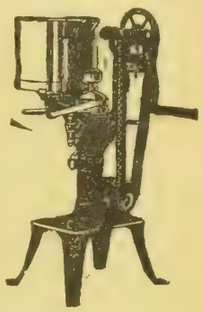
You will find in each I H C many valuable features. You will note that they are

I H C CREAM HARVESTERS

the only cream separators with dustproof and milkproof gearings. You will find in them the most perfect straining device—insuring pure cream and skim-milk always.

You will see that the frame of an I H C is entirely protected from wear by bronze bushings at all points; that the I H C has largest shafts, bushings, and bearings; that it has the safest, simplest, surest, and most economical oiling system; that the flexible top bearing prevents vibration and keeps the bowl steady, no matter how unevenly the power is applied; you will see that the crank is at just the right height for convenient turning, and the bowl is low enough for easiest lifting.

Don't put off this matter of buying a good cream separator. The I H C reputation for fair and square dealing and honest quality machines is a good guide to safe buying. Look for the I H C trade mark. Then you will be sure of getting a separator of proved merit. Visit the I H C local dealer for catalogues and full details. Know the many I H C reasons before you buy any separator. If you prefer, write nearest branch house for full information.



CANADIAN BRANCHES: International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated) CHICAGO U S A

WETHERS.

This sub-class is composed of mature castrated males. Most of those offered at Chicago are from the western ranges. The offerings in this class are decreasing every year owing to the growing demand for dressed lamb, which means marketing when young. They are used in places such as hotels, restaurants, etc., where the comparatively heavy cuts can be used to advantage. The grades are:—Prime, choice, good and common. The same conformation, quality and condition are demanded in prime wethers as in prime yearlings. The most desirable weights range from 95 to 110 pounds, though animals weighing up to 140 pounds, if the quality is good, will grade as primes. Prime wethers are bought largely for the export trade. The grading all through is very similar to that for lambs.

EWES.

These are composed of yearling ewes, surplus breeding ewes, and those no longer useful for breeding purposes. There is a wide difference in age, condition and weight. They do not sell on a par with wethers, because they have, proportionately, a greater percentage of offal and a smaller amount of lean meat. Except when there is an urgent demand for mutton, prime wethers sell for at least fifty cents per cwt. more than prime ewes. Ewes are graded as prime, choice, good, medium, common or culls. Those classed as prime belong to the yearling class, and must be of good quality. The strongest demand is for weights not greater than 100 pounds. The other grades conform generally to the standards outlined for previous classes.

BUCKS AND STAGS.

Bucks are males castrated later than the lamb stage of life, and they sell on a par with bucks. Strictly speaking, bucks are not graded, although the terms, choice, good and common are frequently used. Quotations for these do not fluctuate from day to day as do those for the other classes of mutton sheep. As bucks are distributed in with heavy wether carcasses, the more their carcasses resemble those of wethers the more satisfaction will they serve this purpose. The blocky, tidy form, with a light neck and solid, thick firm flesh, sells best.

DEMAND FOR LAMB IN CANADA.

The demand for lamb and other grades of mutton is increasing in Canada. That demand will be still further increased if sheep-raisers give attention to producing lambs and sheep that best meet the needs of the best class of trade. Thin lamb or sheep meat of any kind, does not give the best return, either in percentage of meat to live weight or in that fine flavored juicy carcass so much in demand by the best paying customers.—Illinois Experimental Station Bulletin.

Keep Boar in Good Health.

The boar's condition should always be that of thrift and vigorous health, not too fat, nor yet so lean that as a barrow he would be considered unfit for pork, says Coburn's "Swine in America." If too fat he will be clumsy, slow and in no wise sure. Discretion must be used in the feeding of the boar, for carelessness in this respect may disqualify him for the season or even make him permantly impotent. It is possible to so poorly feed a boar that his progeny will be exactly the kind his owner does not want. His feed should be nourishing and cooling, and if corn is given it should be tempered with feeds which are somewhat laxative, and be used in moderation. When service is severe his exercise may be greatly lessened, and his proper feeding is the means of balancing this inequality.

The Sort of Sow To Breed From.

In considering the efficiency of brood sows, Henry Wallace gives the following advice: Go over those that have had pigs the present year and ask them the following questions: How many pigs did you have this year? Were they all good ones, or did you have two or three choice pigs and were the rest inferior? How did you take care of these pigs? Are you a good suckler? Are you good natured? Are you a good mother, or are you one of the nervous, fidgety kind, always worrying and fretting for fear somebody will hurt you and your preciopus piglets? If the brood sow on being interrogated, cannot give satisfactory answers to these questions it is not worth while to scold her or give her a moral lecture. Just turn her into the fattening pen; for there is where she belongs."—From Coburn's "Swine in America."

When a Sow is In Pig.

Whether or not a sow is safely in pig will be known usually about 20 or 21 days after coupling, so that the probable time of farrowing may be known. The period of gestation is about 112 days from the date or service. Young sows are likely to carry their first litter for a slightly shorter period, not infrequently farrowing in 106 or 108 days while old sows may take a longer time, extending to possibly 115 days. Instances are exceptional when any variation either way exceeds a week from the 112th day.

Weed old rams and wethers out of the flock and send them to the market. They are a nuisance with ewes and small lambs.

Big boys like to torment little ones sometimes. Old sheep of the masculine gender are often the same way with lambs. Better separate them. When they get to bossing the rest of the flock their company is no longer desirable. Get 'em out.

No family having a home in the country is so humble that they cannot keep a sheep. No man of capital has ever invested in sheep and cared for them intelligently but has found them profitable. For quick returns they are next to the cows and the hens, and in proportion to labor involved and profits returned will outstrip them both. Then join with those who are trying to multiply the sheep and abate the dogs.

One Fact Beats 40 Claims

Remember that one proven fact beats forty groundless claims.

It is to be expected that makers and agents of disk filled or other common, complicated cream separators will claim that disks or other contraptions are necessary in a modern machine. They have only complicated machines to sell and want you to believe they are modern. Though forty such makers and agents make that claim, you can't believe it in the face of one proven fact which makes all such claims groundless. And that fact is that

Sharples Dairy Tubular Cream Separators

contain neither disks nor other contraptions, produce twice the skimming force, skim faster and skim twice as clean as common machines. The World's Best. The only modern separator.

Full pan contains disks from common separator discarded for Dairy Tubular. Other pan contains only piece used inside Dairy Tubular bowls.

Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries.

Sharples 30 Yrs

Write for Catalogue No. 194

THE SHARPLES SEPARATOR CO.

TORONTO, ONT. WINNIPEG, MAN.

A Woman Who Sees This Washer

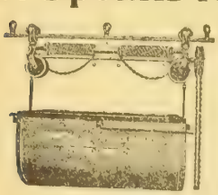
will want it right away. The "Puritan" takes all the work out of wash day—in fact, it does away with wash-day because a big family wash can be done in an hour. Improved roller gear and other exclusive features mean quick, easy washing.

Churning made easy with the "Favorite" Churn—a national favorite.

If your dealer does not handle these two labor-saving devices, write us. 68

DAVID MAXWELL & SONS, - ST. MARY'S, Ont.

It Speaks for Itself



No springs,

No clogs,

No brakes,

No cog wheel.

THE BEST.

because it is the strongest and most mechanical. It runs on the most satisfactory and strongest steel track made.

Write for circular and price list to

Louden Machinery Co., Guelph, Ont

Manufacturers of Hay Tools, Barn Door Hangers, Cow Stalls and Stanchions and Hardware Specialties.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Estimating Fat in Butter.

There are two ways in which you can determine the fat in each churning of butter approximately: First, by taking a sample of the finished butter; add it to a large mouthed, glass stoppered bottle, place it in water having a temperature of about 100 degrees until the butter melts, then with the stopper in the bottle shake vigorously until the salt, water, fat, etc., are thoroughly mixed. Continue this shaking while the butter is cooled by placing the bottle in cold water until the liquid becomes of a creamy consistency. It will later solidify but when it has a creamy consistency, a pipette may be filled with this butter and from six to nine grams transferred to a cream test bottle. The amount in the cream test bottle must be accurately weighed; sufficient water is then added to make about 17 c. c. of water and butter in the test bottle and the butter tested in the same way as milk or cream. It is sometimes necessary to use acid of half strngth rather than full strength in making the test. When the fat is separated in the neck of the cream test bottle, this should be placed in a dish of water having a temperature of about 140 degrees and the per cent. of fat accurately read. This result is then multiplied by 18 and divided by the weight of butter placed in the bottle. Such manipulations will give an approximate idea of the per cent of fat in the butter. It is not a very accurate test, however, as the fat is such a large percentage of the butter that errors in sampling and manipulation have a great effect on the accuracy of the results obtained.

A second method for determining the approximate fat in butter is to carefully weigh the cream churned each day, then from the test of this cream the toatal pounds of butterfat in each churning can be calculated. If the butter made is then carefully weighed the per cent. of fat in this butter can be calculated by subtracting one per cent. of fat from the total weight of cream fat and finding what percentage the difference is of the butter made. This one per cent. subtracted represents the loss of fat in butter making by waste during churning.

The per cent of fat in butter can be increased by churning the cream at a low temperature, using a cold wash water and working the butter while it is cold. The percentage of fat may be decreased by opposite conditions, such as using a warm wash water and working the butter in this warm water.

The best way to find out how much fat you have in each churning is to carefully weigh and test the cream to be churned each time, then weigh the butter and find what percentage the fat in the cream is of the butter made.

For Cows on Pasture.

The following question and answer in a recent issue of Hoard's Dairyman is along the same lines as an inquiry in our last issue:

My partner is feeding cottonseed and middlings to the milking cows. They are in good pasture with plenty of feed, but are very thin. As I met with such exceedingly good results from the change I made by your suggestion with my cattle at Arlington, I would like you to give me the kind of feed you think best suitable for milking cows on grass. A. W.

Boston, Mass.

When cows are on pasture we would not, as a rule, feed them any cottonseed meal. Grass is rich in protein and furnishes all that is necessary, when reasonably good, for cows producing an average flow of milk. To cows that are doing exceptionally well, some grain can be fed to advantage. This is especially true if the pasture is short. A mixture of grain that supplements pasture best contains a rather high percentage of carbohydrates. Ground corn or barley are good feeds to give to animals on pasture and they may be lightened by mixing them with some mill feed such as bran. A mixture consisting of one part bran and three parts ground corn by weight makes a very good combination to feed to cows on pasture. It is not possible to state the quantity each animal should receive, for much depends upon its physical condition, amount of milk it is giving and the kind of pasture. Cows thin in flesh will require more grain than those in good milking condition.

If high protein feeds can be purchased as cheap as those rich in carbohydrates there is no serious objection to their use. We would not feed more than one pound of cottonseed meal daily unless it is considerably cheaper than corn, but feeds moderately rich in carbohydrates are best under ordinary conditions for supplementing pastures.

Sources of Errors in Testing Butter by the Babcock Test.

The use of the Babcock test for estimating the per cent. of fat in butter has never been recommended by Dr. Babcock because of the well known difficulties which interfere with getting accurate results. Among the various factors which make these results uncertain are the following :

1. Taking a fair sample of butter.

2. Accurate weighing of the butter into the test bottle.

3. The high per cent of fat in butter which makes errors in reading the length of the fat column due to changes in temperature much greater than in milk.

4. The difficulties in getting the fat free from water when it is measured in the neck of the test bottles.

The effects of these various errors of analyses is five times as great on the fat as it is on the water determination in butter when butter contains 80 per cent. fat and 16 per cent. water, and the effect of these errors is twenty times as great lor butter testing as it is for milk testing when the latter contains 4.0 per cent. fat.

The errors which may occur in weighing the sample of butter for testing is multiplied by the ratio between the weight taken and 100. If an error of one-tenth gram is made in weighing 10 grams of butter, this one-tenth gram is one-tenth per cent of 100, but it is 1 per cent. of 10 grams; and so 80 per cent. of this 1 per cent falls on the butterfat, while only 5 per cent. of it would fall on a milk testing 4 per cent. fat.

The actual effect which an error of 1-10 gram in weighing out the butter will have on the final results may be seen by the following illustration: If instead of 10 grams only 9.9 grams of butter are weighed into a test bottle, after which the test is completed and the reading of the fat in the neck of the test bottle is found to be 45. This reading multiplied by 18 gives 810, which divided by 10 grams of butter gives 81 per cent. fat in the sample tested. If, however, an error of 1-10 gram is made in weighing, and the product of 45x18 or 810 is divided by 9.9 grams, then the result is 81.8 per cent. fat.

The Magnet Cream Separator

is **entirely different** in its **construction** and is **better** than any other cream separator.

It is built

MECHANICALLY CORRECT.

The MAGNET Skimming Perfectly sitting on the rough PRAIRIE
THE SQUARE GEAR AND DOUBLE SUPPORTED BOWL DOES IT STEADY AS A ROCK

MECHANICALLY CORRECT means putting the power on the machine by properly **graded steps** or gears. When you see a very **large wheel** turning a **very small one**, it is a **violation** of **mechanical rules** and means wear, breakage and **trouble**, but is done to **save the cost** of the extra wheels of steps. The **Canadians** who originated the **MAGNET** were **educated mechanics** and could **not** be induced to apply the make shift, worm gear drive, adopted by makers who preferred cheapness in construction to durability. Use has shown that the worm gear drive soon wears, the bowl wobbles and then considerable butter fat goes into the skim milk at each separation. The square gear does **not wear** and the **MAGNET** skims as closely after twelve years use as the first day it skimmed.

Do not take our say so, examine for yourself

Take the **MAGNET** stand, it is **solid, strong** and **rigid**, constructed to **hold the gears without vibration** or **possibility of accident to anyone.**

Square gear drive is used, the only drive approved of for a **fast running** machine like a cream separator.

The shape of the **MAGNET** bowl is **different** from others, being **longer,** enabling the insertion of the famous **one piece skimmer,** so constructed as to take out all the butter fat but a trace, at the same time **draws** out all **dirt and foreign matter** and holds the same to be washed off. This skimmer delivers **pure cream.**

Bronze bearings are used on the **MAGNET,** because being harder than steel they do not wear out.

Glass hard steel balls, extra large size, are used, will not wear or break.

The brake (**MAGNET PATENT**) circles the bowl, stops the machine in eight seconds, does not injure it.

The bowl is supported at both ends and cannot wobble or get out of balance (**MAGNET PATENT.**) All other separator bowls are run on one end, the vibration of which leaves butter fat in the skim milk

Every point in the **MAGNET** is a strong point, no weak spots.

A cent postal card will give you a full demonstration of the **MAGNET** in your own dairy. No obligation to buy.

THE PETRIE MFG. CO., LIMITED,

Vancouver, Calgary, Winnipeg, Hamilton, Montreal, St. John.

HAS USED DR. FOWLER'S EXTRACT OF WILD STRAWBERRY

For Over Seventeen Years

FOR DIARRHŒA, DYSENTERY, SUMMER COMPLAINT, ETC.

Mrs. Holliday, Box No. 86, Wroxeter, Ont., writes:—"I must say that we have used Dr. Fowler's Extract of Wild Strawberry for over seventeen years, and have found nothing to equal it for all Summer Complaints, Diarrhœa, Dysentery, etc. Our house is never without a bottle of the Extract and I can recommend it to be kept in every home, especially where there are children."

You run absolutely no risk when you buy Dr. Fowler's Extract of Wild Strawberry, as it has been a standard remedy on the market for over sixty-five years.

A few doses have often cured when doctors' prescriptions and other remedies have failed. Its effects are marvellous. It acts like a charm. Relief is almost instantaneous.

We wish to warn the public against being imposed on by unscrupulous dealers who substitute the so-called Strawberry Compounds for "Dr. Fowler's."

Ask or "Dr. Fowler's," and insist on getting it, as the cheap imitations may be dangerous to life.

The original is manufactured only by The T. Milburn Co., Limited, Toronto, Ont. Price 35c.

The variation of 1-10 gram in weighing the sample of butter into the test bottle has made an error of 8 per cent. fat in the final result.

If this same error of 1-10 gram is made in weighing 6, instead of 10 grams of butter into a test bottle and the test of the butter is made in cream test bottles reading to 30 or 40 per cent, the effect of this small error is much greater. Suppose the reading of fat from the six grams of butter is 28; this multiplied by 18 gives 504 which divided by 6 (the weight of butter taken) gives 84 as the per cent. of fat in the sample tested. If, however, the reading 28 multiplied by 18 or 504 is divided by 5.9 instead of 6, then the result is 85.4.

This shows a difference of 1.4 per cent. fat between the result obtained when the weight of butter is taken as 6 grams and when it is 5,9 grams.

If this same error of 1-10 gram is made in weighing the butter for a water determination the effect of the error on the final result will be much less as is seen by the following figures: If 10 grams of butter are weighed for a water determination and loss of weight by drying is 1.6 grams, then this loss is 16 per cent of the 10 grams of butter weighed out. If an error of 1-10 gram was made in weighing the butter then the loss, or 1.6 grams divided by 9.9 grams instead of 10 grams of butter gives a percentage of 16.1 per cent water in the sample tested. In this case there is a difference in the final result of only 1.40 per cent when an error of 1-10 gram was made in weighing the butter.

Buttermakers in creameries do not often make weighings closer than 1-10 gram on the scales they use and many of these scales are not sufficiently sensitive to weigh as fine as 1-10 gram. They will, therefore, have difficulty in getting duplicate tests of the same sample of butter to agree much closer than 1.0 per cent fat simply because of the effect of this one source of error which is introduced when weighing the butter for testing.

Another point in testing butter for fat by the Babcock test, that will have a great effect on the final results, is the temperature of the fat column when it is measured. The extent to which the fat column will change with the increase or decrease in temperature is shown by the following figures:

The expansion of fat by a change of 40 degrees in temperature amount to .07 per cent fat in milk testing 5 per cent fat; that is, if a milk testing 5 per cent fat is read at 110 degrees F. the reading will be 5.07 per cent fat when the temperature is raised to 140 degrees F.

This same effect of expansion on the test of butter containing 80 per cent. fat will be 16 times more or .07x16 equals 1.12 per cent fat which will be the difference in the reading of the butter fat test at 110 degrees and 140 degrees F. Or, if the fat test of a sample of butter when read at 110 is 80 per cent fat, the same sample when read at 140 degrees F. will be 81.12 per cent fat.

All the other errors of manipulation in testing butter by the Babcock test, such as determining the point of reading the top and bottom of the fat column, loss of moisture and of the butter when it is being weighed into the test bottles, and other mechanical losses, are at least five times as great for a fat as for a water determination in butter, and 20 times as great for butter as for milk testing 4 per cent fat.

The errors all come on the amount of the substance tested and 80 per cent of this error falls on the fat while only 16 per cent of it falls on the water in butter and 4.0 per cent of the error would fall on the fat in milk testing 4.0 per cent fat.

After understanding the full effect of all the errors of analyses as well as the difficulty of weighing butter into test bottles, the necessity of using extreme care in every manipulation and in keeping the scales and glassware in a most sensitive and accurate condition, one must not expect to use the Babcock test for determining fat in butter with the same degree of accuracy as it is used in milk and cream testing. Duplicate results on the same sample butter may not agree within one per cent of each other and the results obtained may easily be 2 per cent. from the actual fat contained in the sample tests. All these variations and inaccuracies being due to the errors of analyses and the fact that the fat is such a large percentage of the butter.

When fairly satisfactory results are obtained in testing butter by the Babcock test it is probable that the errors of one class have compensated for, or balanced the errors of another class in the opposite direction, but at the same time it is possible that all the errors may be in the same direction and thus increase the inaccuracies of the results.

E. H. FARRINGTON.

Dairy Dept. University of Wisconsin, in Hoard's Dairyman.

Good Care.

A breeder of registered cattle was showing us his herd once when we remarked to him that we never saw his animals in as fine condition before.

"Yes," he said, "and it is mainly owing to my foreman. He is the best caretaker I ever had. My cows never did as well at the pail as they have the past two years since he has had charge of them. The more I study this cow question, the greater importance do I attach to care and feed. Blood is a good thing, the foundation thing, but what is blood and breeding worth if you do not give the cattle plenty of good feed and constant, watchful care?"

There was a whole sermon in those few words; a sermon to hired men and foremen, showing them the line of their best thought, effort and ambition; a sermon to cattle owners showing them what to provide for. This is particularly true with heifer calves until they are bred and safely in calf.—Hoard's Dairyman.

Visitors to the Exhibition

are cordially invited to visit the **splendid New Oxygen Parlors,** recently opened up in **St. John, Suite 20, Robinson Building, opposite Market Square.**

It is a well-known fact that in many homes there are those who are in suffering and pain. Obviously it is of first importance to be relieved of such a condition.

Well, we claim to have the means whereby such relief may be permanently obtained.

It is found by the use of the Oxygenator. A marvellous device that has the power to so open the pores of the body that largely increased quantities of Oxygen are transmitted through the pores to the blood and thereby drives out disease.

We positively claim to cure, by this means, all curable diseases. The machines have been on the market in England, Mexico and the United States during the past 14 years and therefore are not an experiment.

They last for life. No Drugs, no Massage, no Electricity used—Oxygen only and nothing but Oxygen.

Our 72 page book, "Oxypathy," free for the asking.

The wonderful machines may be purchased outright or rented by the month.

Some of the most representative citizens throughout the Maritime Provinces are the proud possessors of our machines.

Lady attendant. Office reached by electric elevator. 'Phone Main 2367.

P. S.—Be sure and see our exhibit on the main floor at the Exhibition, right next to St. John Electric Light Co.'s display.

The Maritime Oxygenator Co.,

C. Fraser McTavish, General Manager.

ST. JOHN, . . . New Brunswick.

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The largest Prize List for Apples offered by any Exhibition in Nova Scotia this season.

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THE HORSE.

Sore Shoulders.

The care of the shoulders of young horses is one of the most important factors to keep in mind during the first few weeks of the spring work.

A horse can not do satisfactory work with shoulders that pain him every time he takes a step. The horse may be looked upon as a machine that is expected to do so much work, and if some of the mechanism is out of order, then the amount of work is lessened. But, also the animal must be looked upon as a creature with feeling and ambition, taking pride in its work, that is a willing, obedient and, therefore, valuable servant, and should be properly cared for.

The first thing of importance to consider in the draft horse is the collar. Most of the injured shoulders are the result of poorly fitting collars, and the fault usually lies in a collar being two large. It is a good idea to have a harness maker fit the collars to your horses. He may be able to remove padding, and in other ways make the collar over so that it will fit nicely. Heavy collar pads are to be avoided if possible. They are hot and cause the shoulder to sweat; this keeps the pad and shoulder wet, and the skin becomes soft and blisters easily.

Dirty collars are probably as responsible for sore shoulders as ill fitting ones. In the spring the horse's hair is long and holds large quantities of dirt and scales from the skin. He is soft from lack of work and sweats profusely. This forms a gummy dirt that adheres to the collar and makes, when dry, a hard, tough surface. The ordinary farm hand feels that his duty is done if he scrapes the dirt from the collar with the back of his jack knife. This method, however, is not an especially good one for the leather of the collar, and a smooth surface is not left. A damp sponge used in the evening as soon as the collar is taken off will, in one or two minutes, remove the dirt. This may be followed by an oiled rag; if this is done, the collar, in the morning should be soft and smooth.

Careless driving, jerking a horse out of the furrow and into it again, allowing him to work with his head around on one side, all tend to produce sore shoulders.

Of course, the first precaution to take is not to ask the colt to do a full day's work until he learns something about his job and ceases to fret. The shoulder will then gradually become toughened. It is a good idea to sponge the shoulders with cold water—just plain cold water. Alum water has been used to good advantage; also weak solutions of tannic acid. Alcohol tends to toughen the skin.

The injuries to the top of the neck very frequently terminate in fistulas, withers, etc. A blister near the point of the shoulder is likely to become a callous and form what is known as a "cold abcess." Ill fitting collars and poor drivers are equally responsible for a condition known as "sweeny."

It has been the earnest endeavor of this article to show that the farmer is directly responsible for the sore shoulders of young horses; that by observing a few simple things he may avoid loss of time, expense and suffering or perhaps permanent injury to his animals.

If an accident occurs and in spite of careful attention a horse's shoulder becomes injured, do not wait until a fistula has developed, or an abcess has formed, or the animal is "sweened," but seek the advice of a veterinarian while there is still a chance to check the progress of the injury. This is not the proper place to teac the treatment of such conditions after the injury has been done; it takes years of school work to do that, but it is a good opportunity to impress upon the minds of horse owners that such unfortunate things may be entirely avoided.— H. E. Kingman in American Cultivator.

How the Stallion Should Live.

Editor Maritime Farmer:—

There is nothing better than the usual stallion ration of oats and bran. Crushed oats mixed with about one-fourth as much bran by weight makes a good combination. It is bulky, safe, nutritious and agreeable to the stallion's taste, digestion and requirements. A bran mash once or twice a week has for years been deemed desirable for its laxative effect unless the stallion has access to grass, but some leading practitioners condemn the weekly bran mash as conducive to colic. Some owners prefer to depend entirely on cured feed throughout the season, but others equally successful esteem a few minutes grazing daily at the halter or the run of a grass lot as very essential to the health and vigor of their stallions. The freedom of a roomy lot with a high strong fence is a splendid thing, grass or no grass.

The essential thing in the feeding is to furnish the horse abundant nourishment and keep his system in vigorous healthy form. Whatever grass is fed should be grazed by the horse. It is not safe to feed it in the barn, for almost surely some of it will at some time sour in the manger and produce trouble. It is better to graze the horse in the evening rather than in the morning.

Timothy hay is the safest kind to feed, and most of it should be fed long. If the horse bolts his grain, cut some hay short and mix about two quarts of that with each feed of grain. The total amount of grain feed per day should be about one pound for each 100 pounds that the horse weighs, but more should be given if he has a large amount of road work or is a hard keeper. There is a great variation in the requirements of different horses in this respect. Of hay he should have about one pound a day for each 100 pounds that he weighs and little variation need be made from this rule unless he gets considerable grass. Give the grain in three equal feeds and give about half the hay at night and rest divided between morning and noon. If strictly first-class clover or alfalfa hay is available a little of it may be fed with evident benefit. A little oilmeal, not over one pound a day, is fed by some successful stallioners with good results.

It is doubtful if sufficient benefit follows the use of eggs to make it worth while to use them in most cases. If the horse appears to be poorly nourished and has a very large patronage there may be something gained by feeding them. Men who feed eggs generally give two to four eggs beaten up in as many quarts of milk. To this may be added a double handful of oilmeal, first scalded, and the whole fed warm after supper.

Kings Co., P. E. I. GROOM.

Treatment of Corns.

Whenever possible, remove the cause of the corn. The sole should be examined thoroughly to determine the extent and nature of the corn.

If a suppurating corn is present all the sole under-run with pus should be removed. Then apply a pack of 1-1000 bichloride and keep moist with this solution for 3 or 4 days. Then pack the corn with white lotion for three days. The horse should then be shod with a bar shoe and all pressure taken off the wall in the region of the corn.

FARMERS OF THE EAST

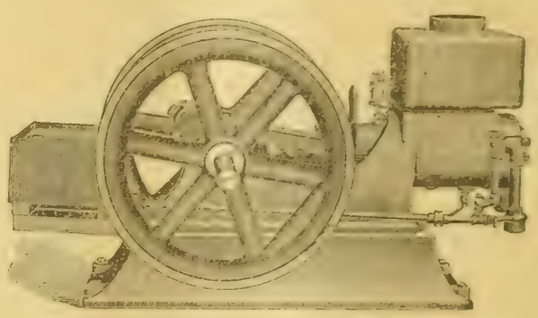
should take out an agency for the easiest selling Gasoline Engine on the market to-day. We refer to the

"WATERLOO BOY"

FROST PROOF STATIONARY ENGINE

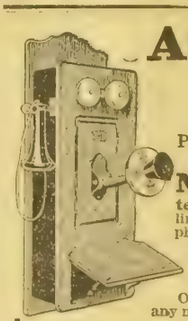
The most complete and up-to-date Gasoline Engine on the market to-day.

Write at once for full particulars. We will give you every assistance in making a sale. Don't delay, the territory you want might be taken if you wait until to-morrow.



I am a "Waterloo Boy" but can do the work of several horses.

J. D. FRIER, - Sussex, N. B.



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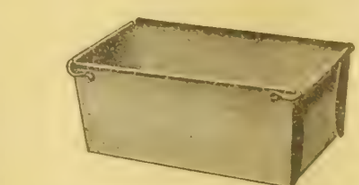

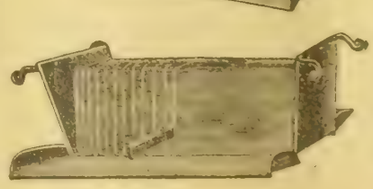

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Cannot burn, air chamber underneath. Excellent for loaf cake or pressed meats. Need not remove bread to cool. Simply let down sides of the pan and make clean cut with knife or remove without breaking. Will last a lifetime. Sent postpaid on receipt of **38 cents.**

FREE—A useful article will be given free to any housewife for five minutes of her time.

Address, for particulars,

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POULTRY.

Coal Tar Smudge.

A dangerous disease of poultry is canker, or fowl diphtheria, or swollen eyes as it is commonly called. It is known by the presence of yellow, cheesy matter in the throat and windpipe, and is usually caused by the fowls sleeping in close, damp, unsanitary quarters. Since the introduction of fresh air poultry houses, this disease has materially reduced and its attacks have been less severe.

One of the best cures for canker is fumigation with coal tar. This is done in the following way: After the fowls have gone to roost in a tightly inclosed room, take an old can and place in it one quart of coal tar for every 100 birds. Bring the tar to a boiling state by plunging into it a piece of hot iron. Close the door and make the house as near air tight as possible.

A thick smudge results, in which the fowls should be allowed to remain until the following morning. By listening at the door one can distinctly hear the inmates coughing but no fear of their suffocating need be entertained. (When this treatment is used on valuable birds, we would not start it at night. You might just as well confine in the house the fowls you desire to fumigate, and heat the coal tar after breakfast. You can then examine the birds every hour during the day, and do away with the danger of their being suffocated by an overdose of the fumes. Personally, we could not rest contented if we started the treatment at night, and were worried over how the birds were going to stand it. Ed.)

Fowl diphtheria is primarily a disease of the throat, and the swollen eye is a secondary result. In its distress caused by difficulty in breathing, the fowl tosses its head from side to side. This results in mouth being thrown into the eye, causing inflammation and suppura- the diphtheretic discharge from the tion of that organ.

It might be mentioned that fowl diphtheria is not communicable to the human being, being totally distinct from the disease of the same name affecting man. Fowl diphtheria and human diphtheria are caused by entirely different germs.

The prevention of this disease is much easier than the cure, and fresh air is one of the greatest safeguards against attacks of diphtheria. In treating this disease in children the physician always opens the windows of the sleeping room to the sash and keeps the air of the room pure, no matter how cold it is. If you are threatened with an outbreak of diphtheria or roup among your birds you will find fumigating the birds and house with coal tar will check the disease and kill the germs. Afterwards, open the windows and depend on fresh air day and night, and healthful and strengthening food to bring the fowls into good health.—August Schwarz, in The Standard.

Lice Always a Menace to Chicks.

Eternal vigilance is the watchword for June, says a writer. Constant care and attention to details is the price of success. Several days ago a lady neighbor asked me to come and see her chicks and tell her what was the matter with tnem. I said "lice." She said "No." Continuing she said: "I never could raise May-hatched chicks. They just stand and sleep their lives away." I went to the poultry yard and found three broods of chicks about a week old. I picked up a "sleepy" chick, parted the down on its neck, head and under the lower beak, took my little pocket magnifying glass and looked into the down, and found it a living mass of the large grey head lice. These lice move out very little. They are really ticks. They burrow into the skin, stand on end, head down with their slender body close by the side of the small quill of the downy feathers. There were hundreds of them on that chick and on every one of them. I handed the glass and chick to the lady and told her to look. She looked closely, then said: "Those are not lice, but are the new feathers coming out." I then took the chick, picked off a bunch of these pin-feathers, laid them on the glass, and soon it was living, crawling mass. Then she exclaimed: "Good Lord! I don't wonder they get sleepy."

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This is the reason why so many people have a superstituous notion that May chicks will not live. Where chicks are hatched under hens they must be examined almost daily, and the hen dusted with good insect powder at least once every week until the chicks are four weeks old. If the lice are on the chicks they must be dusted every three or four days for two or three weeks. How do we do this? Do not undertake to dust every individual chick. Take an empty five-pound lard pail with a close-fitting cover; put a small handful of insect powder into the pail, put in eight or ten chicks, put the cover on tight, and invert the pail quickly two or three times; remove the cover, take the chicks out and put in another lot and repeat until all are dusted. This does it quickly and thoroughly and does not waste the powder. I can dust 100 this way in ten minutes. Dust the hens and repeat in four days.

Rules and Regulations for Co-Operative egg Circles.

1. That our organization be called the.....branch of the Poultry Producers' Association of Canada.

2. That our officers consist of a chairman or president, a secretary-treasurer, and a board of three directors.

3. That the duties of the officers be as follows:

(a) To appoint or elect two of its officers to a plcce on the central board.

(b) To attend to any business that may arise in connection with the working of the system, and improve it if possible.

(C) To keep an outlook over the conditions generally.

4. The membership of the association shall be $1 per annum. To be held, used and disposed of as the directors see fit from time to time.

5. That the circles as now organized have one general superintendent to be appointed by the buyers, and his decision in regard to the quality of the eggs delivered shall be considered final.

6. That anyone may become a member (upon payment of fees), who is interested in the production of better product and will agree to conform, to the best of his ability, with the rules and regulations as set forth, or as may be set forth by the executive from time to time.

7. Rules and regulations pertaining to eggs:

(a) Only eggs gathered from regular nests may be delivered.

(b) Eggs must be delivered at least twice a week, except in winter months, when they must be delivered at least once a week.

(c) Eggs from 'found' nests must not be delivered.

(d) Real small eggs or over-sized eggs may not be delivered.

(e) Rough shelled or ill-shaped eggs may not be delivered.

(f) Stale eggs may not be delivered.

(g) That all male birds be killed or removed from the flock as soon as the hatching season is over, June 1.

(h) That all eggs produced by said flock shall be sold through the circle. This applies for one year only.

(i) That members may deliver eggs from only his own or her own flock.

(j) Notwithstanding anything heretofore set forth patrons may keep for their own use any eggs required, and must not sell any eggs through the circle that does not comply with these rules and regulations.

(k) Eggs as gathered must be kept at an even temperature as near to 60 degrees as possible, and be kept free from draft and dampness.

(l) That any bad eggs in any way delivered and paid for will be counted for if possible and the loss made good to the buyer.

(m) Only artificial eggs shall be used as nest eggs.

8. That we as members will do all in our power to make this a success from a producer's standpoint.

Notes.

Watch for birds' nests in your orchard before you remove a dead tree. If you can save a nest of young birds spare the tree awhile.

Birds destroy thousands of noxious weed seeds every year. They do much good in keeping down insect pests and noxious weeds. Protect birds.

This is the season that young turkeys render such valuable assistance in destroying insects. Those who do not have a flock of poults are unfortunate.

How many hens do you have in your flock that do not pay their board? This may be the reason you do not find poultry profitable. Eliminate the unprofitable hens.

Little chicks will require plenty of fresh water in their reach this hot weather. If this is neglected you will be disappointed in the growth and health of your chicks.

It is poor economy to keep old hens or old roosters. Hens are at their best at three years old, and when kept longer, are apt to give poor returns. Roosters should never be kept longer than two or three years.

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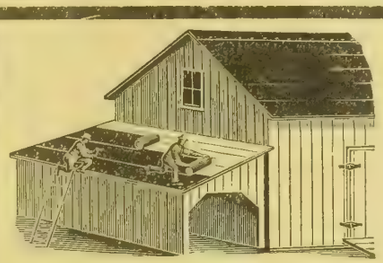

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The Old Brook Farm.

(Continued from last issue.)

The matter was sharply contested in law. Public sympathy was of course entirely with the Taylors, but that did not help the decision being rendered against them. The excitement and suffering which he had undergone threw farmer Taylor into a fever, from which he never recovered. Reuben was at that time only sixteen years of age, a bright, intelligent, industrious boy. His mother was a shrinking, fragile woman; and Amy, his sister, was not yet in her tenth year. The family were oblig ed to leave the homestead, which almost broke Mrs. Taylor's heart. She held in her own right a few acres of wood and pasture land; and this, with the help of Reuben, was all the doubly stricken family had to depend upon for their subsistence. But the boy was brave and energetic, and there were many disposed, for his father's sake, to employ him. And as he grew older the pasture lands were converted into thriving wheat fields; and Reuben commenced farming on a small scale for himself.

But it was hard, slow work, though the sweet face of Charity Ames, now blossomed into early womanhood, extending afar off on the mountains of his future, seemed to lend new strength to his energies—new courage to his heart. But Reuben kept his secret as a girl would hers; and only occasionally waited on Charity home from meeting or singing-schools. He never by a word or look signified to the girl of his love what lay so deep and tender in his heart, but Charity was a woman, and guessed it.

"Oh, I am so glad, Reuben! You must go right off with me."

"Go where, Pussy?" And he caught the child in his arms as she sprang towards him. She was a pretty creature, Amy Taylor, just in her twelfth summer, with brown hair, with a flicker of gold in it, and eyes like Reuben's, and cheeks and lips like clover-blossoms.

"Oh, just over to the store! Mr. Mathews said he should get back from town before sundown, and he'd bring the new calico dress mother's got for me."

"Wait until after tea. I've been pullin' stumps all day."

"Oh, I can't, Reuben!" shaking her head around, so that the touch of gold struck out vividly; "besides it will be too late to see the dress to-night, for Mr. Mathews shuts up at dark."

"I'm afraid, daughter, that supper'll grow cold afore you can go there and back," interposed the voice of Mrs. Taylor, as she broke several freshly laid eggs into the spider.

"No it won't, mother; Dobbin can go fast, and get back in half an hour."

Amy ran up to her mother, and wound her arms about her neck in a way that was irresistible. It was quite evident she was a spoiled child.

"Get your bonnet in a hurry, then!" exclaimed Reuben, as he took down his coat from the peg on which it was hanging. "I reckon you wouldn't feel quite so set on a ride if you'd been pullin' stumps and buildin' stone fence to-day."

"Don't go with her, Reuben," said Mrs. Taylor, in an undertone. She was a little, pale-faced, sorrowful-voiced woman.

"Well. I sha'n't have a moment's peace until bedtime," rejoined the indulgent brother. And the next moment Amy was at his side.

"I'm all ready, Reuben."

The young man pinched her dimpled chin, pronounced her the torment of his life, and they set out together.

They had gone about a mile in the rumbling old vehicle, which had to perform the three-fold duty of carriage, wagon, and cart, when a horse suddenly rushed wildly past them. Every muscle of the noble animal was instinct with terror; his nostrils were dilated; and, with his long brown mane caught and tangled in the wind as he swept by, he presented that half-thrilling, half-appalling spectacle which a thoroughly frightened horse always does.

"O my, Reuben!" exclaimed Amy, drawing in a long breath. "Wasn't that kinder grand, though?"

Reuben shook his head. "I'm afraid he's done some mischief. He's broken away from a carriage; and them shafts must bruise his legs afore long, so he'll come to his senses."

About half a mile further down the road, they came upon a carriage overturned and and broken, near a large pile of stones, over which the frightened animal had evidently attempted to leap, and shattered the vehicle. And close by this lay a man with his face to the earth, and the life apparently struck out of him.

"Is he dead? Oh, is he dead?" Amy whispered the question with white lips.

"I don't know, little sister." Reuben was quietly dismounting. He had those strong steady nerves which are so invaluable in case of any sudden catastrophe.

The young farmer went up to the prostrate man and lifted his head. Amy saw his face suddenly grow white as the dead, and his hands shake as leaves do when sudden gales ride through the trees.

"God in Heaven, have mercy upon us!" ejaculated Reuben Taylor. And he did not say these words lightly, but humbly and reverently, as a Christian should; for in the face of that prostrate man he had recognized him who had laid his father's head, in the prime of his years, under the grass—the man who had broken his mother's heart, and driven the widow and the orphans from their home, and filled his own youth with toil, and patient longing and waiting.

"Who is it, Reuben?" cried Amy. "It's Abel Ross!"

A little cry went out of Amy's lips, for that name had been a source of terror and grief to her ever since her earliest remembrance.

And looking on the prostrate man, there came, for the moment, over the soul of Reuben Taylor a feeling of intense, unutterable loathing mingled with something of triumph that his old enemy at last lay at his feet. And then through the feeling crept the solemn words of the prayer which his mother taught him before he could remember, "Forgive us our trespasses as we forgive those who trespass against us."

"Amy, there is a tin pail in the cart; run to the spring, quick, and fill it with water." And the farmer lifted the unconscious man's head and laid it on his knee, and stroked away the iron-gray locks from his face tenderly as his own mother could have done it.

Amy was frightened into unquestioning obedience. Her brother bathed the white rugged features, and she stood still looking on with long shivering sighs—all the brightness and vividness gone out of her face in its stark terror.

At last a long convulsive shiver went over the man; he opened his eyes and stared wildly a moment at Reuben; he attempted to rise, but his right arm fell down helpless—it was broken. He groaned out sharply, and shut his eyes. In a moment he had fallen back into unconsciousness.

"What shall we do with him? O dear!" cried Amy, wringing her hands.

Reuben meditated a moment. They were on a lonely, little frequented road; there was not a house in sight.

"We will carry him home," said the young farmer, decidedly.

"Oh, Reuben, what will mother say?" ejaculated Amy, for she could not get over her old, childish associations with the name of Abel Ross, or her terror lest some evil should befall them when brought in contact with its owner.

"Mother will say I did jest right," answered Reuben, simply. And he lifted the wounded man into the cart, and held his head on his knee, and chafed his temples with cold water; while Amy took the reins into her shaking hands, and drove slowly towards home. Once during that slow drive the man opened his eyes with a convulsive start.

"Are you in much pain, sir?" asked the farmer.

"Yes, in my shoulder"—and he writhed and groaned fearfully; and then suddenly fastened his eyes on Reuben. "What is your name?" he muttered.

"Reuben Taylor." The young man had the name and face of his father.

There was another loud groan, and a movement as though the sufferer would have writhed himself away; but he fainted again.

At last they drew up before the little yellow story and a half house.

"Amy," said her brother, "go in and tell mother who is here; but you're a sensible little girl when you've a mind to be; tell her in a quiet sort of way."

Amy understood, and executed her work very well, considering her own agitation. In a moment, Mrs. Taylor presented herself at the door, with a face which seemed fairly death-struck, it was so white and strained.

"O Reuben!" she gasped.

He answered her, with a look—"I must bring him right into the house, mother, and lay him on your bed. Then I must run for a doctor, for I fear the life's nearly gone out of him."

They carried the sufferer into Mrs. Taylor's little bedroom. The window was curtained all summer with a trumpet vine through which the sunshine filtered down on the striped carpet, or wound its golden threads among the thick shadows. So they laid the sick man under the low roof to which he had driven the widow and the orphans; and then Reuben started off for a physician, and dispatched a messenger to inform Farmer Ross's family of what had transpired.

He had three sons, but the oldest was not twenty, and their mother had died several years before. They all hurried over with the "hired men," in great alarm, when they heard the tidings; the physician, however, preceeded them, and he pronounced Farmer Ross to be in a most critical situation, and that he would not answer for his life if he was removed to his home, that being distant six miles.

It was evident that he had sustained serious internal injuries, for the large, stalwart frame would quiver every time it was moved, and great beads of perspiration gathered on the rugged brow. The broken arm, too, was much inflamed, and required constant care. Mrs. Taylor had that most invaluable gift in woman— "skilful hands;" and, though one of the "hired women" from the "Ross Farm" was sent over to take charge of the invalid, her ignorance and awkwardness gave him so much pain that she was glad to relinquish her task to the gentle, soothing fingers of Mrs. Taylor.

It was two weeks before the physician gave his consent to the removal of Farmer Ross. What passed through his mind during this time was never known. He was naturally a reticent man, and then he was brought so near to the grave that he could almost feel the cool waving of the banner of the King of Death over his temples. Much of the time he lay in a heavy stupor, but there were moments when the dark eyes under those shaggy eyebrows would follow Mrs. Taylor with a look of conscious intelligence round the room, and it seemed to her there was something more in them—something of regret and pain. Several times, too, he muttered the name of "Reuben Taylor," in his drowsiness, uneasily, and he would groan out when Reuben entered the room, and close his eyes.

At last, however, he seemed eagerly desirous to return home, and the physician gave his consent, though the recovery of his patient was still doubtful. He conversed but little except on the subject of returning home; but on the morning that he was to be removed he summoned his hostess to his bedside, and said to her: "Mrs. Taylor, I know all that you and your son have done for me; and, whether I live or die, I shall

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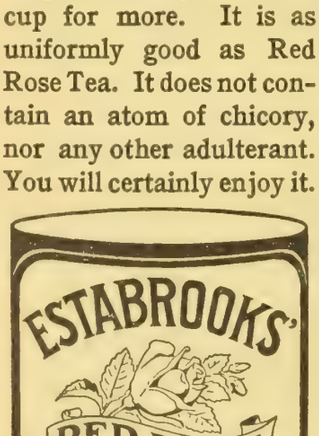

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not forget it." That was all he said; all the thanks they received, saving from the farmer's eldest son.

A month had gone by. It was just in the opening of July; one of those vivid, affluent, tropical days that hang like rubies in the thread of the year. Reuben Taylor came in at noon from cutting hay, wiping the thick perspiration from his bronzed forehead.

"Who do you think has sent for you to come right over there, after dinner?" asked Mrs. Taylor.

"I can't tell, I'm sure"—throwing himself down on a chair by the window. "It's too hot to go anywhere afore night."

"Abel Ross has sent for you Reuben. The hired man says he's able to set up two or three hours every day, and the doctor says he's out of danger, though he'll never be the man he was afore his fall."

"I'd calculated on getting through with the south field this afternoon," said Reuben, irresolutely.

"Hadn't you better let it lie over, my dear boy?" timidly interposed Mrs. Taylor, as she placed a platter of young corn on the dinner-table.

The young man pondered awhile, and at last audibly concluded—"Well, I reckon I may as well risk it."

Farmer Ross sat by the window of his great white farm house, so that the sluggish wind from the sea, which cooled a little the hot heat of the afternoon, could wave to and fro through his iron gray locks. The strong, muscular frame had fallen away greatly, and the sunken cheeks and the deep rings around the eyes told their own story of long, slow, physicial suffering.

The farmer nodded to Reuben as he entered, and motioned him to a chair; he had always been a man of deeds rather than words, and those hard, selfish, grinding, cruel deeds to many who were in his power.

"Reuben Taylor," said Farmer Ross, looking with his deep-set eyes full in the young man's face, "do you know that you saved my life, the other day?"

"I think I did, sir," answered Reuben, in his straightforward, outspoken way.

"And do you know that I probably laid your father in his grave?" And this time a smart color crept slowly into the ghastly cheeks of the old man.

"I believe you did, sir." No wonder that Reuben's voice faltered a little now, as the memory of his father flashed over him.

Farmer Ross winced under the words a moment, as though they pained him; and there was no sound in the room save the little rill of melody which the summer wind made as it came in through the windows. At last Farmer Ross spoke again, taking a folded sheet of paper from the table beside him.

"Well, Reuben Taylor, I've thought this all over in my sickness; and it's laid very heavy on my conscience o' nights to think that I'd been the means o' killing the father, and the son had saved my life. So I resolved to make you and yours all the reparation in my power; and there's the deed to the old "Brook Farm," without flaw or mortgage."

"Sir—sir!" muttered Reuben, rubbing his hands across his eyes, and staring at the old man, for he thought he must be dreaming.

"There it is safe and sound, and nobody'll be smart enough to get it from ye, or yer heirs, this time I reckon!"

Then the truth dazzled and broke into Reuben's heart. He thought of his old child-home with its low, pleasant, dear old rooms, of the great garden at the back, with its plum-trees and currant-bushes; he

(Continued on page 716.)

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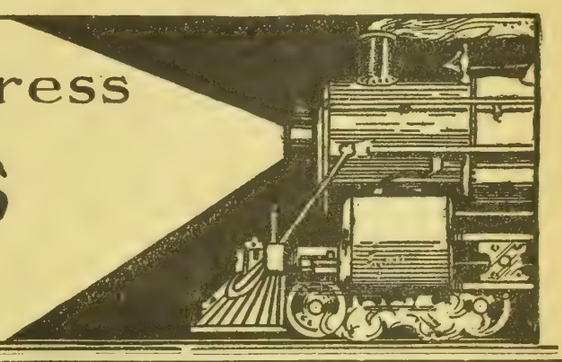

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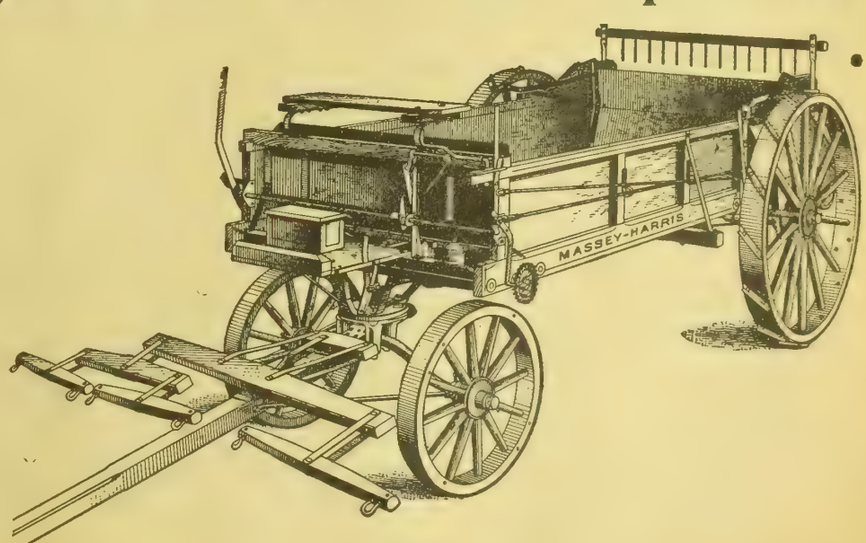

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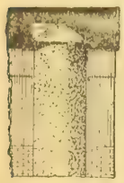

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Child Training.

H. Clay Trumbell was once asked by a friend to give his theory of child-training. His reply was "Theory? I have no theory in the matter. I had lots of theories before I had any children, but now I do with fear and trembling in every case just that which seems to be the best for the hour, whether it agrees with any of my old theories or not," and I believe most parents feel the need of something more practical in the realm of child-training than untested theories.

Training a child is a possibility long before teaching that child is. The tiny infant can be trained to go to sleep in the arms of its mother, in a cradle, or in a bed, without rocking or with rocking, in a light room or in a dark one. A very young child can be trained to cry for what it wants, or to keep quiet as a means of securing it. Thus a child six weeks old may be well started in its life-training, although its teaching is not attempted for months later. Teaching fills the mind, training shapes the habits, and the parent who does not recognize the possibility of training his children as well as instructiug them, misses one of the highest privileges as a parent, and fails of his most important work for his children.

NO CHILDREN PERFECT.

Every child, is in a sense, partially developed, an imperfectly-formed child. There are no absolutely perfect children in this world, all of them need restraining in some things, and stimulating in others, therefore, we must study, our children to find out their peculiar faults, and be very wise and careful in our treatment of those faults.

Perhaps the wise guiding of the child will should be counted among the foremost duties of one who is responsible for a child's training. Will breaking has no part in the right training of the child. To break a child's will is to destroy the child's privilege of free choice. A father says to his strong-willed boy: "Johnny shut the door." Johnny says: "I won't," and a conflict of wills results, brute force compelling the boy to do what he chooses not to do. What then should be done? Let the father say: "Johnny, you may have your choice in the matter. You can either shut the door or take a whipping." Now the boy has a choice to make. A parent should never say: "I will whip you until you do," and no child ought ever to be punished unless he understood, when he chose to do the wrong, that he was thereby incurring the penalty of punishment.

JUDICIOUS DENIAL.

A child ought to be denied by his parents many things which in themselves are harmless. It is an injury to a child to always have food he prefer, every plaything his parents can afford him. If he has never a desire ungratified he is poorly prepared for the duties and trials of everyday life. The average child of the present generation has more indulgences from his parents in any one year of his life than the average child of a generation ago received in all the years of his life. The child of to-day expects new things as a matter of course. He asks for them in the belief that he will receive them. A boy of nowadays can hardly prize his new bicycle, after all the other presents he has received, as well as his father, prized a little wagon made of a raisin box. A little girl cannot have as much

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enjoyment out of her third new wax doll, that opens and shuts its eyes, as her mother did out of her only doll, stuffed with rags, or made of painted wood. We should deny our children many things if we wish to train them to self-denial and endurance.

DON'T NAG A CHILD.

Then in training our children there must be always a large measure of letting alone. Nagging a child is not training a child. Don't be always don'ting, and avoid an issue on any question of discipline whenever it is safe to do so.

We must train our little ones to control their nerves, or they will be hopelessly controlled by their nerves. Perhaps a child has fallen, or cut his finger or has burned his hand, it is natural for him to shriek with pain and fright, but the mother's duty here is to help her child to control himself, and be calm. Coaxing and rewarding the child into quiet is not what is needed. A good illustration of the unwise way of inducing children to seem to have control of themselves is given in a familiar story of the little fellow throwing himself on the floor, and kicking and yelling, and then crying out: "Grandma, grandma, I want to be pacified, where are the sugar plums?" It must be a very dull child, indeed, that will not cry and fret a great deal when it is so pleasantly rewarded.

Scolding is never in order. If a child has done wrong, a child needs talking to; but no parent ought to talk to a child while that parent is unable to talk in a natural tone of voice, and with carefully measured words. The parent's first duty is to gain entire self-control.

But the vital question in connection with every home is, Is the atmosphere of this home, suited to the life and growth, to the development of the child's best nature? That atmosphere must be full of the pure oxygen of love to God and love to man—all this it may be, all this it ought to be.—MRS. T. E. CHISNALL.

Teach Obedience and Self-control.

After close observation of my own boys and others' sons, it seems to me that obedience and self-control are two requisites all important for the growth and happiness of our children. By obedience I do not mean nagging a child until he minds the parent, or threatened punishment the impetus for the child to do as he is bid, but to train him to a prompt cheerful swiftness of the service required. Self-control does not mean self-repression, lest all the lovable, spontaneous qualities that are a child's by right would be taken away. It means a certain temperance in living even when young, to scorn a mean act, to control the temper, to share with others.

When a baby is old enough to understand "yes" and "no," it is ready for its first lesson in obedience.

When in a temper a little friend of mine is allowed to destroy his personal belongings. What right has his parents to expect him to respect the property of others later in life?

It is along these lines of odedience and self-control that the George Junior Republic has won for boys a place unique and strong, which shall fit them for years of acceptable service in our larger Republic.

Although we mothers must hesitate when we speak collectively of children, knowing that each child has an individuality of its own, and that the character-building must be suited to the need of the child, yet, we believe there are certain essentials, like obedience and self-control, which are necessary for the development and happiness of all children.

But however we may strive to achieve the "best things" for others, or to discern what is most important for good citizenship, we shall all fail signally if by our own example we do not "study to show ourselves approved" and by our own life prove the worth of those qualities we so desire for our boys.—G. H., New York.

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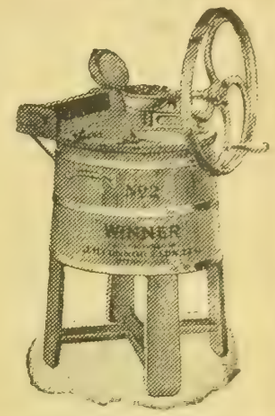

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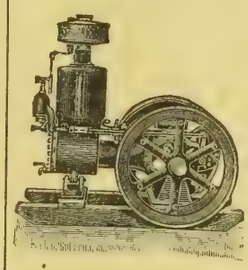

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"I want to tell you", he writes, "of the wonderful cure Father Morriscy's medicine made of me. I was troubled with Rheumatism so badly that I could not get into my wagon alone. After using his medicine for three weeks I was completely cured, and felt like a boy.

"I am now a man of 79 years of age, and in good health yet—to Father Morriscy's medicine I owe all thanks.

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Father Morriscy's No. 7 Tablets act directly on the kidneys, invigorating them so that they can thoroughly cleanse the blood of the Uric Acid which causes the Rheumatism, and thus permanently cure.

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MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 7th October, 1910, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, one and three times per week each way, between Donegal, Waterford and Sussex, from the 1st of January next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Donegal, Waterford, Sussex and route offices and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, 22nd August, 1910.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Chamberlain's Colic, Cholera and Diarrhoea Remedy is today the best known medicine in use for the relief and cure of bowel complaints. It cures griping, diarrhoea, dysentery und should be taken at the first unnatural looseness of the bowels. It is equally valuable for children and adults. It always cures. Sold by all dealers.

The Old Brook Farm.

(Continued from page 713.)

thought of his mother at her favorite seat by the kitchen window, just over which the white doves cooed all summer; he thought of Amy's brown head with the flicker of gold in it flashing in and out of the old rooms; and he thought of another sweet face, dearer than all the others, flitting from room to room, the blue eyes full of smiles, and the small lips full of snatches of old tunes—the face that would make the joy, and crown, and sanctity of his home He thought of all this, and it was too much—he bowed his head on his hands, and burst into tears.

"Reuben"—the voice of Farmer Ross certainly had a quiver of feeling in it, and the hard scrawny hand was laid tremulously on the youth's thick hair—"are you sorry to get the old place back?"

"Sorry!" he was answered when Reuben lifted up his face, "Oh, Farmer Ross, how can I thank you!"

"You needn't try. It's only makin' amends, you know, for, though the law was on my side, the Lord's shown me that I never had any right to the old Brook Farm; and I hope you'll forgive me for takin' it from you."

And Reuben Taylor took the old farmer's hand, and answered solemnly, "The Lord God is my witness that I do this hour.

It was an evening full of the glory of starlight and the crystal lustre of moonlight. The full, clear, silver light lay in rivers and lakes, over the meadows, and sheathed the limbs of the orchard trees, and slept in long glittering spears on the low roof of the yellow-brown cottage. Charity Ames sat under the small porch, on the low sill of the front door, and her sweet face looked out sadly on the night.

No wonder her heart was somewhat heavy as her thoughts slipped their cable and went out sadly to the future. She thought of her father who had complained that very afternoon that the crops "didn't promise over smart this year, and he didn't see his way clear to pay a dollar on the mortgage." She thought how old age was beginning and deepening the cares and burdens to creep more heavily upon him, which only his strong manhood could bear. She thought too of the years of "patient waiting" which would elapse before the lover of her youth could take her to his heart and home; and the tears came softly into her throat and eyes as she sat in the moonlight on the low sill, that summer evening. A quick step came along the grass. "Charity, little Charity!" exclaimed a voice which always made her heart leap. She sprang up, but not before he had seen the tears she thought she had hidden.

"I've got good news for you, Charity, glorious news!" The triumphant ring of his voice cut through the still night air.

"What is it, Reuben?"

"I've got back the old Brook Farm!"

"Oh, Reuben, I must be dreaming!" And she put her hand to her eyes, just as he had done that afternoon.

He slipped his arm around her waist. "No, it's true, every word of it, Charity. I've got the deed safe at home. I'll tell you all about it." And he seated her back on the door-sill, and knelt by her side, and related the story of his interview with Farmer Ross to the bewildered, delighted girl. "You ought to have seen how mother took it," he concluded, "I actually thought she was gone raving mad. She cried one minute, and laughed the next, and tossed her arms round, and it was a long time afore I could get her anything like quieted."

"Oh, Reuben, I am so glad, so glad!" Her joyful tears said the rest.

"I've got a few repairs to put on the old place, and by next fall, it'll be all ready for you, Charity, little Charity."

Her face fell in a burning blush on his shoulder, but in a moment it was lifted again, and the faith of her fathers broke triumphantly from her lips, in that grand old Hebrew chant, "O that men would praise the Lord for His goodness, and for His wonderful works to the children of men!"

THE END.

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Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
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" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

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Housekeeping for Men.

The man of the house made no motion toward rising, but simply raised his voice and called, "Ma! Ma!" getting louder and louder, until a faded woman made her appearance. He was robust and comfortable looking sitting there in the warmth of the autumn sun, while she was thin and care-worn. When she appeared he explained the case and waited for her reply. "These folks have had an accident, Ma, and they want some old cotton cloths. I didn't know whether you had any or not." Ma trotted away and brought out the desired article, saying meanwhile that she always kept a supply of old sheets and towels for such purposes. Her remarks were interrupted by the howls of her son, who shrieked out that he was hungry, and she hurried away to wait upon him. In less than an hour the husband and father and the three sons, all over ten, had made a dozen demands on her time, all trifling things that any well-trained man might have done for himself, or boy either. In response to any inquiry as to why she had never trained them to wait on themselves, she replied that it was easier to wait on them, and besides she didn't like to have men mussing through things.

Looking at her faded, anxious face one can't help wondering what those helpless men will do when she breaks down, as she is bound to do one of these days at the present rate. This scene reminded me by contrast of a comfortable farm-house where the "girls are all boys," but where order and peace and comfort reign, simply because the men of the family have all been trained to do housework in an emergency. Any one of the boys or the father can fry steak and ham, make coffee, get up good biscuits or corn bread, bake or boil potatoes, cook eggs, make toast, prepare rice and cereals and turn out a substantial meal on short notice. More than that, they can wash the dishes afterwards, and

can lay their hands on such of the household supplies as bedding, their own garments, towels and dish towels. I have seen men awkwardly trying to wash dishes with any sort of rag for a dish-cloth, from the floor-cloth to an article of dress, in a household emergency, but not in that home. The family has had its share of illness when it was impossible to procure help, but through it all, husband, sons and mother pulled together, and the result was most gratifying.

The easiest way to get the boys interested in housework, especially cooking, is to allow them to bring their friends home occasionally and have a "spread" in the kitchen. The only condition should be that the kitchen is put to rights afterwards, and this the lads will readily agree to do. Of course at first the corners will be neglected, and the dishwashing will give a neat housekeeper cold shudders, but in time they will do better. Boys dearly love fried fish, baked potatoes, oyster stews, fried chicken and a dozen and one other good things, and they should be allowed as many of them as possible, provided they show the right spirit in helping with the work later. It is a fine thing to have a thirteen-year-old boy kill, clean, joint and fry a chicken when company comes unexpectedly, and in reaching the place where he may do such things he learns lessons in anatomy, patience, cleanliness and skill that are worth a place in any one's education.

He learns that cakes and cookies require hard work on the part of some one; therefore, he will think twice before wanting to be selfish about them. He will also find that when he has company his mother has gone to much trouble to provide good things, so he is willing to take his share of the trouble. In one home, the twelve-year-old son waits on the table when there is company, doing the work noiselessly, with clean hands, and with everything about him clean, thus giving his mother added pleasure in her guests, and making her the envy of less capable friends. This boy can also wash and put away the dishes as well as any girl when occasion demands. His wise mother does not impose upon him, but rewards him freely for every effort in her behalf so that the housework is not irksome to him.

In many homes the mother lays out every clean garment and hunts up every tie, button and handkerchief for the father and boys—a very foolish proceeding, unless she can hire a servant for the regular work, and only have that for pastime. Many little girls are brought up to think it is their duty to wait upon their brothers, when in reality the brothers should be able to wait upon themselves. The boy who cannot sew on a button, hunt up his own shoe strings, find his socks and handkerchiefs, and be able to get dressed without causing a commotion upstairs and down has been cheated of his rights by his doting mother. If he goes from home on business his clumsy fingers must learn all these necessary things when he should be doing something else, and if he marries, his wife must begin his education twenty or thirty years late, or else forever wait upon him. A little course in cooking, sweeping, finding his own things, and helping with the housework in emergencies will hurt no boy, but it will make of him a more manly man and a better citizen.—Hilda Richmond in Country Gentleman.

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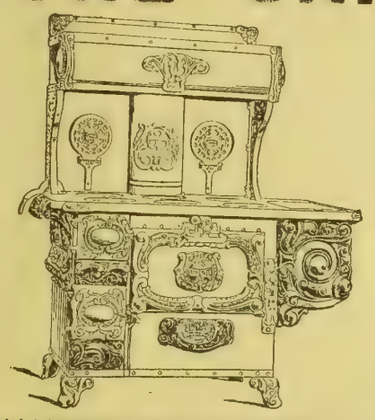

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It has a roomy fire box for wood and the linings can be changed from wood to coal or vice versa without the disturbing of a bolt.

This Range is made of Heavy British Cold Rolled Non-Corrosive Polished Steel. It never needs black-leading, only an occasional light rub with a cloth will keep it clean and bright.

Lots of room on the top and in the oven to do the busy morning's work.

There are thousands of these Ranges in the homes of the best farmers in the country, giving absolute satisfaction.

Ask your dealer for **THE CAPITAL FAVORITE** and take no other.

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The dependable flour is

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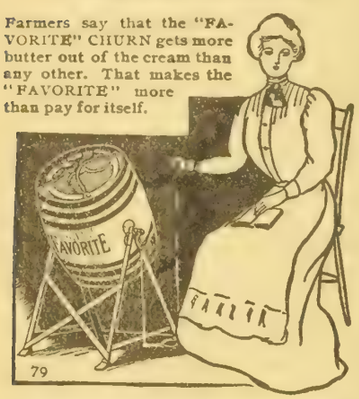
Dr. Morse's Indian Root Pills,

enable the bowels, the kidneys, the lungs and the pores of the skin to throw off these impurities. Thus they prevent or cure disease. 12

25c. a box.

MORE BUTTER AND BETTER BUTTER

Farmers say that the "FAVORITE" CHURN gets more butter out of the cream than any other. That makes the "FAVORITE" more than pay for itself.



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Easiest running because of roller bearings —strong, durable—with hand lever and foot tread. 8 sizes, to churn from ½ to 30 gallons of cream.

Every woman, who washes clothes, ought to have a "PURITAN" WASHER.

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Meet your friends at the Maritime Farmer Tent at the St. John Exhibition.

FLORICULTURE.

All enquiries in this department will be answered by H. E. Goold, Florist, Sussex, N. B.

Writer says:—My pansies seem to be a total failure this season. In many sections of the country affected by fog, many places where good healthy plants have been planted they have grown smaller rather than larger and do not seem to have any vitality. No trace of insect ravages can be found and it really seems that the cold wet spring is entirely responsible.

This is undoubtedly the greatest season for weeds that we have had for years. The only safe way to kill them this year is to pull them and cart them to the compost heap.

Your Sweetpeas would appreciate a top dressing of hard-wood ashes applied six inches from the stalks of the plants and stirred into the soil Great care should be taken that the ashes do not touch the vines as they would be sure to burn the foliage.

In watering your Century plants care should be taken that water be not allowed to stand in the hollow of the leaf as it is almost sure to burn the leaf when exposed to the hot sun. See that the drainage is good in the pot and give your plant plenty of water. I would think that correspondent's plant having leaves decay at the tops was afflicted by poor drainage and consequent souring of the soil.

Pick off all the seed pods on your annuals; you will find that it adds much to their blooming qualities and sightly appearance. This rule applies, especially, to poppies, on? pod of seed of this plant will infect a square yard of surrounding garden.

Every gardener should have a manure water barrel in one corner of his lot. Get an old oil barrel, bore a hole in the side near the bottom then get a cheap molasses faucet and insert it in this hole. Raise the barrel about two feet from the ground so that you can put your watering can under the faucet. Put about six inches of good excelsior in the bottom of the barrel so that the coarse manure will not choke the faucet and then use about one quarter of a barrel of good, fresh cow manure to a full barrel of water and stir frequently while using. Use fresh manure to every three barrels of water.

Of course the conditions of the soil would regulate the frequency of use but for ordinary soil I would think about twice a week would be about right. Sandy soil would take it much oftener than many clay soils.

The rose slugs have commenced their ravages on the out-door roses. Hellebore should be applied at once, as a precautionary measure, even if the slugs are not yet in sight. Use a lgrge spoonful of hellebore to a watering can of water and stir continuously while applying.

Pin the branches of the verbenas to the ground as soon as they begin to run. You will find a hair pin a good thing to use if the soil is not too light.

If you have any beds of hardy bulbs hyacinths, tulips, etc., that have been planted several years and have become crowded and need replanting, from now until the last of August is the time to lift the bulbs as this is their dormant period. After lifting the bulbs, which are now free from roots and tops, they can be immediately replanted or dried off in a cool, shaded position and kept in a cool, dry position to be planted out again at any time before the ground is frozen up. They do better if planted out before the middle of October. All bulb beds should be well drained so no surface water will stand on them in winter; otherwise losses will result.

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Mica Axle Grease

makes the wheel as nearly frictionless as possible and reduces the wear on axle and box. It ends axle troubles, saves energy in the horse, and when used on axles of traction engines economizes fuel and power.

Plows, Harrows, Drills, — **Granite Harvester Oil** insures better work from the new machine and lengthens the life of the old. Wherever bearings are loose or boxes worn it takes up the play and acts like a cushion. Changes of weather do not affect it.

Gasolene and Kerosene Engines — **Standard Gas Engine Oil** is the only oil you need. It provides perfect lubrication under high temperatures without appreciable carbon deposits on rings or cylinders, and is equally good for the external bearings.

Steam Traction Engines and Steam Plants — **Capitol Cylinder Oil** delivers more power, and makes the engine run better and longer with less wear and tear, because its friction-reducing properties are exactly fitted to the requirements of steam traction engines and steam plants.

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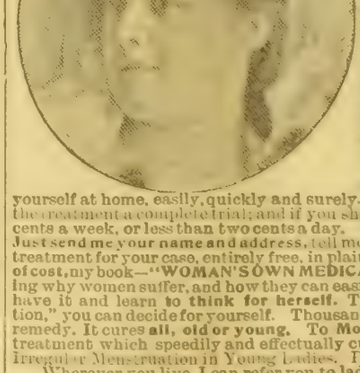
FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.



I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure—**you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhœa** or **Whitish discharge, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths,** also **pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weakness peculiar to our sex.**

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. Just **send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by **return** mail. I will also send you **free** of cost, my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn **to think for herself.** Then when the doctor says "You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all women's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

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"When I found myself in this condition and getting worse I took the medicine the doctor prescribed for me but without any result.

"One evening I was reading the paper when I saw your advt., so cut it out and the next day went to the druggist and procured a box, and since that time my nervous system has been in perfect condition.

"Be assured, gentlemen, that I will never be without Milburn's Heart and Nerve Pills for they gave me strength to work and support my mother, who is an infirm widow and of whom I am the only support."

Milburn's Heart and Nerve Pills are 50c per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

FREE

Send us your name and we will send you Free, all charges paid, this handsome LUCKY HEART PICTURE BROOCH - which is the latest, daintiest and prettiest jewelry novelty, all the rage everywhere. We are giving it ABSOLUTELY FREE to introduce our goods. Just send name and address and we will send it to you at once. Address

ALDEN MFG. CO., 26 ROY ST., PROVIDENCE, R. I., U.S.A.

C. C. RICHARDS & CO.

Dear Sirs,—For some years I have had only partial use of my arm, caused by a sudden strain, I have used every remedy without effect, until I got a sample bottle of MINARD'S LINIMENT. The benefit I received from it caused me to continue its use, and now I am happy to say my arm is completely restored.

Glamis, Ont. R. W. HARRISON.

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Extension to Breakwater at Dipper Harbour, N. B.," will be received at this office until 4.00 P. M., on Monday, September 26, 1910, for the construction of an Extension to the Breakwater at Dipper Harbor, St John County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department and at the offices of E. T. P. Shewen, Esq., District Engineer, St. John, N. B. Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on Application to the Postmaster at Dipper Harbour.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures, stating their occupations and places of residence. In the case of firms, the actual signature, the nature of the occupation, and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honorable the Minister of Public Works, for the sum of two thousand one hundred ($2,100.00), dollars, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By order,
R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, August 24th, 1910.

Newspapapers will not be paid for this advertisement if they insert it without authority from the Department.

Our Prince Edward Island Letter.

Editor Maritime Farmer:—

Grain cutting is well under way, and crop is turning out well above the average. On well drained, fertile soil, oats are an immense crop; wheat and barley are also heavy and well filled; corn and roots are growing fast and will be easily a good average yield, all of which, along with our phenomenal crop of hay, will give this province an uplift the effect of which will be felt for years, if the best possible use is made of all this surplus feed. Fortunate indeed is the farmer who finds himself well stocked up with any or every kind of farm animals.

The want of manure is the continued cry here, and if ever some farmers are going to get any greater quantity ahead to be able to grow more roots and corn, this is surely the year. Hay is worth very little in most sections and grain is always comparatively low at the season when the great bulk is marketed, but a splendid market has opened up for our finished products during the last few years and these can be transported across our costly water route much cheaper than can the raw products.

That it pays to feed our raw products at the present prices for finished products is beyond question. The reason why so many in this province think differently, is due to the fact that where farmers are shipping their raw crops and each and every one receives the same prices and there can be no dissatisfaction; but where these same farmers attempt to turn this into any finished product or live stock many conditions arise that affect their profit. So much more depends then upon the skill and ability of the feeder on the class of stock kept, on the housing and care and includes all the little details that tend to greatly change the success that one man can have over another above what is possible in shipping raw produce, that great dissatisfaction is sure to arise, and many quit in disgust a business that they never stuck to long enough to properly learn or master. The greatest trouble, too, is that considerable capital must be invested in this to get the greatest profit and returns are slower coming in. This province, however, is very slowly changing in the proper direction but there are oceans of room for improvement along this line.

We have had a visit lately from the Royal Commission on Technical Education, (the great panacea now for all our ills.) This latter seems to include all our necessities imaginary or otherwise, and might have, (had it been organized a little earlier) taken over the little cruise of the Commission on Bacon Hogs. We wonder who next will be agitating for a commission—one to investigate our transportation difficulties will now be in order. However, we hope great good will eventually come of Technical Education, especially so far as it will apply to agriculture.

At the meeting held in Summerside, quite a number of farmers, amongst others, were examined under oath, after a discours? by Dr. Robertson, intimating that he did not want to hear any speeches, etc. If he got all the information he wanted out of the few questions put, there certainly wasn't much information required. The idea seemed to be that more illustrations or demonstration work should be grafted into our children's education. It seems we have been educated clean off the land, taught anything but our own business and now we are to have our children taught by "properly trained teachers" to love farm life, to create a fondness for nature and all the beautiful things that grow around them that they never noticed before, all of which is right enough if not carried to extremes. If we can just strike the happy medium in how far to push this new doctrine without working in so many frills that it makes our schools ridiculous it will be all right, but I am old fashioned enough to believe that many of these problems we are asking our leaders in educational matt?rs to solve in reference to the training of our children can be taught by parents alone. If we could inject the germ of good, sound common sense into all the parents we would not hear much about the problem of keeping boys on the farm or any other place where they are properly influenced to stay. Children inherit their parents' dis- parents have the wisdom to govern their training and according as the parent has the wisdom to govern themselves in the life they would wish their children to follow along with their proper guidance and connection, so will the child follow. Many things, such as morals, temperance and the liking or disliking of any occupation in life can never be taught in our public schools. The child must "live" in them long before its earliest recitation. I do not mean to infer that improvement cannot be made in our present school system but many things in this new education can only be taught at home.

W. M. LEA.

You never take a chance when you buy Red Rose Tea. You know the tea will be just as you expect—that fine, rich flavor and refined even strength which never varies and always pleases. 65

Prices: 30c., 35c., 40c., 50c. and 60c.

WATCHES

in

Permanently Guaranteed Gold Filled Cases.

These are the best made, as good as 14 kt. gold for ⅓ the money **$22.00 to 38.00**

A good movement in a cheaper Gold Filled Case, guaranteed at **$7.50**

A good mount, in a Nickel or Gun Metal Case at **$5.00**

Eyes Tested and Glasses Specially Ground and Fitted the same day.

Diamond and other Rings at Special Prices to visitors to our Fair.

ALLAN GUNDRY, THE WATCH REPAIRER.

68 Prince Wm. St., - ST. JOHN, N. B.

Rabies—Hydrophobia

During the past year there have been many cases of rabies reported in the United States and Canada, which have caused much loss of live stock, mostly cattle, hogs and horses, and in several localities people have been bitten by rabid dogs.

This is one of the oldest diseases known. In the fourth century B. C. it was described by Aristotle, who wrote: "Dogs suffer from a madness which puts them in a state of fury, and all the animals that they bite when in this condition become also attacked by rabies."

The season of the year makes very little difference, as the disease is just as prevalent in winter as it is in summer. This seems contrary to the ideas of many people, who think that July and August, "dog days," is the only time that dogs are subject to rabies.

Cause.—Rabies is caused in nearly all cases by the bite of a rabid animal. It is possible to contract the disease from the saliva, the tears from the eyes or the milk of a rabid animal. The rabid dog is a source of danger a few days before the symptoms of the disease appear, but in no case before he was bitten by a rabid animal, or otherwise inoculated. Hot weather, lack of water or ill treatment will never in themselves produce rabies.

The dog is the principal source by which rabies is spread over the country. The freedom which he is given, his natural manner of self-protection, and his tendency to roam about bring him in contact with many other animals. Cats, hogs, horses and cattle, in the order named, are less dangerous than the dog.

Symptoms.—The symptoms seldom develop in less than fourteen days after the animal was bitten—most commonly three to six weeks—but they may not show for six months to a year. Not all animals bitten develop the disease. It depends some upon the part of the body which was bitten. In man there is less danger if bitten through the clothing than upon the bare parts of the body, as the hands or face, the latter place being less dangerous. It is not uncommon for the symptoms to develop in less than two weeks when bitten upon the head.

The symptoms show in one of two forms—furious or dumb.

Furious Rabies.—With the furious form the dog is at first noticed to seek the company of his master more than usual, or he will hunt dark, secluded places. Sometimes he will make sudden starts towards objects. These conditions last for a day or two. Later he becomes more restless, wanders about, and will often travel twenty to thirty miles in a day. While he is on this trip he is very likely to bite cattle, hogs and dogs, often passing horse and man, unless they interfere with his course. He will usually return home unless he is killed. During this period he is irritable, seldom eating or drinking, not because he does not want food or water, nor because he is afraid of water, for he is not, but fram the fact that his throat is paralyzed and he cannot swallow. Often he will force sticks and stones down his throat in efforts to satisfy hunger and thirst. This period of irritation lasts for two to three days, followed by a period of paralysis, which has already taken place in the throat, as shown by the voice, which has already changed to a prolonged howl, and the inability to swallow. This is followed by paralysis and death, the entire symptoms lasting from four to ten days.

Dumb Rabies.—The dog seeks his master's company or may hide in dark places, being unable to eat or drink, the lower jaw hangs down and the tongue protrudes, which may swell and turn dark. This condition is followeh by paralysis and death in four to ten days after the first symptoms appear. Either form of the disease may change to the other in the same animal.

Symptoms.—In Cattle. They are prone to chase chickens, dogs, and may run at man, whom they are less apt to attack. Often falling down from no apparent cause, twitching of muscles, inability to eat, due to paralysis, often showing signs of sexual excitement even when pregnancy is well advanced, but seldom biting. These symptoms are followed by paralysis and death.

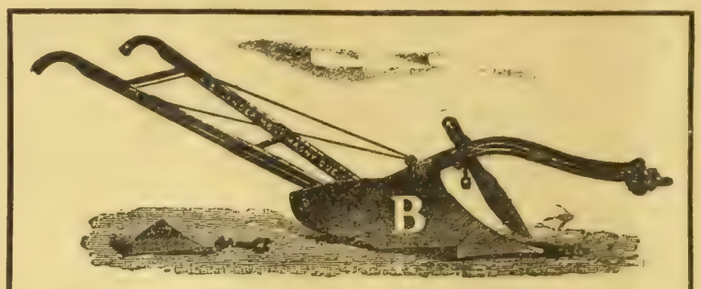
The Horse.—Is often more vicious than cattle, biting the manger, himself, or anything within reach; also showing many of the same symptoms which are shown by cattle.

The symptoms of rabies vary greatly, but in general there is a first stage of melancholia lasting two or three days, followed by a period of excitement which lasts two to three days more, followed by a period of paralysis. Death usually occurs inside of ten days after the first symptoms appear.

Diagnosis.—This is made from microscopic examination of the brain, which shows small round or oval bodies from 1-25000 to 1-1000 of an inch in diameter. These are called Negri bodies, as they were first noticed by a man by the name of Negri in 1903. They have never been found in the brain of an animal unless the animal has been in-

This Plow Is Specially Made For Quebec And The Maritime Provinces

THIS is a plow which we build specially for use in the Maritime Provinces and the Province of Quebec,—is equipped with a mouldboard especially adapted to the soil. We have made a marked improvement in the turn of this mouldboard which makes it much easier for the plowman to hold. For general use in these provinces, except for new, unbroken hard ground, we strongly recommend it. The mouldboard, like on all "B" Plows, is made from special soft-centre steel, and the construction throughout is the very best. Look for the "B" on the mouldboard when you buy; it is your guarantee of quality. This plow will scour in the most difficult scouring soils and, if fitted with our wheel attachment to go under the beam, can be handled with ease by a boy. **If your dealer cannot supply you, write us and we will tell you who can. Tell us the type of soil on your farm and we will see that you get the exact style of mouldboard your land requires. We send our Catalog free on request.**



This is the Plow for Quebec and the Maritime Provinces. Our "B" No. 6.

A. BELANGER
Established since 1867
at MONTMAGNY Que

Get the Book
Send the Coupon

This scientific treatise on the preparation of the perfect seedbed, the foundation of good crops, deals, chapter by chapter, with "Soils and Fertilizers," "Plowing and Plows," "Seeds and Seeding," and is of incalculable value to the practical farmer. Under ordinary circumstances, this valuable book would cost you a dollar; but to farmers who will fill out the coupon as an evidence that they are really interested, we will send one copy of the volume FREE. Extra copies may be purchased at one dollar each. The edition is limited; if you want the book, fill out the coupon and send it NOW before the supply is exhausted.

FREE $1.00 Book Coupon

A. BELANGER, MONTMAGNY, QUE. (100)

Gentlemen:—

I operate a farm of..... Number of Acres

acres of ..... soil. Type of Soil

Please send me "How to Increase the Acre's Yield," FREE.

Name.....

Address..... Prov.....

3

THE Maritime Farmer TENT

WILL be on the exhibition grounds at the three Provincial Exhibitions—St. John, Halifax and Charlottetown—where we will be glad to meet all of our friends. If you happen to be at these exhibitions and want to write a letter home or to a friend please remember that you will always be welcome to do so at our tent. Writing paper and envelopes will be furnished free. If you owe us a dollar or so we will be pleased to see you. If you have a friend who does not take the MARITIME FARMER bring him to see us. You will be doing him a favor and helping us at the same time. If you get tired of seeing the sights and want a place to rest come to the tent, you will be welcome. If you are thinking of advertising, come and see us, we will be pleased to furnish you any information we can with reference to same.

No mattter what you are doing at these exhibitions do not forget us, we want to see you. We will do our best to make it pleasant for you.

THE MARITIME FARMER,
SUSSEX, - - - - N. B.

COME AND SEE US.

oculated with rabies virus; therefore when Negri bodies are found in the brain of an animal there is no doubt that the animal had rabies.

There are also changes in the nervous ganglia in the last stage of rabies. These changes are also found in other diseases, which makes this manner of diagnosis more uncertain and of little use in the early stages of the disease. Sticks and stones may be found in the stomach of a rabid dog.

Treatment.—This consists of a preventative treatment (Pasteur): which must be taken before the symptoms have developed. In order to be effective it should be taken within a few days after having been bitten by a rabid animal. The treatment may also be given to valuable domestic animals. The "mad stone" is of no use as a prevention of rabies.

What is Bran?

Consumers of concentrated feeding-stuffs have for years at times found more or less occasion for complaint in reference to their quality. This finally resulted in the passage of a State law nearly two years ago, which, as amended last winter, is still in force. In its present form it requires no registration or special guaranty or tagging for pure bran or pure shorts, while impure feeds of the general nature of these must be registered as mixtures and be labeled so as to show the net weight of the package, the name and address of the manufacturer, the name of the feed, and a guaranty as to the percentage of fat and protein. Hence a definition or description of pure bran becomes of considerable importance to manufacturers and consumers alike.

The chemist of the Experiment Station, who is by the law charged with the duty of inspecting feeding-stuffs in person or by deputy, holds that bran to be pure must not include anything that is separated from the wheat in preparing it for the milling process. Some wheat as marketed contains bits of straw, broken weed stems, oats, cheat and other foreign substances that must be removed before the wheat enters the rolls for grinding. All such screenings must be excluded if the bran is to be classed as pure.

The shrunken wheat unfit for flour-making and also removed in this preparatory progress is doubtless of equal feeding value with the bran, and its presence in bran is not economically objectionable, though technically an impurity. This shrunken wheat is by some millers ground and separated into a coarse part and a fine part, the former being put into the bran and the latter into the shorts. Such action is held to be legimate, but this should not be taken as an approval of the introduction in a ground state of the other light materials of little feeding value. If such materials, either ground or unground, are marketed with the bran the product must be sold as "bran and screenings," and under the general label and guaranty referred to, and must be registered with the Director of the Experiment Station.

Some millers who make corn-meal dispose of the corn bran, separated in that process, by mixing it with the wheat bran. This practice is not legitimate, and if followed the mixture must be designated as "wheat bran and corn bran" and be registered and labeled as described above. 8

Millers can adopt and maintain a high standard for their bran, and put out a product in which they can take pride, only by keeping out all adulterations. These by-products of questionable character can be disposed of without loss by making a mixed feed with which they may be incorporated, which must of course be registered with the Director of the Experiment Station annually and carry the proper label and guaranty. Purchasers will then know what they are getting, and bran will be of a uniformly high grade.

Attention may also be drawn to the fact that the rulings above stated are in harmony with the policy of the federal authorities in respect to mill products entering interstate commerce.

Consumers of bran and other concentrated feeding-stuffs are invited to bring to the attention of the chemist of the Experiment Station any evident disregard for the provisions of the feeding-stuffs law, bearing in mind that accidents are liable to occur in any establishment, and that millers as a class are of a high order of honor and integrity.

J. L. WILLARD,
Chemist Experiment Station.
Manhattan, Kan.

Are You Going to Build?

One Great Problem Before You Is YOUR ROOF

To settle it right will save you cost of repairs and a new roof—to settle it wrong means dissatisfaction from the start.

You read many extravagant claims; you are frequently confronted with high-sounding guarantees; you have heard of countless brands of roofings, but there's only one way to tell the good from the bad. *Make them show you what they've done.*

We are ready to show you actual buildings in your neighborhood where NEPONSET PAROID Roofing has been on roofs for years. The money saved in repairs more than offsets the difference in price between BIRD NEPONSET Roofings and the cheaper kinds. Back of Bird NEPONSET Products are records of long service and 115 years of experience in one line of business. We originated the ready roofing idea and make different roofings for different classes of buildings.

NEPONSET PAROID Roofing

for your barns, poultry buildings, etc., gives service equal to that of highest grade shingles

Unlike shingles, it resists fire, doesn't blow off or deteriorate. NEPONSET PAROID has been in service for twelve years on United States Government, Railroad, Industrial and Farm Buildings, in all climates. If it meets these severe conditions, it will surely meet yours.

NEPONSET PROSLATE Roofing and Siding, for dwellings and all other buildings where artistic results are desired. It is more attractive than shingles, wears like slate, makes an attractive-looking roof, resists fire, saves money and always gives satisfaction. It may be used on exterior walls in many attractive ways.

For such poultry buildings, brooder houses, sheds and temporary buildings as require a low-cost roofing, you should use NEPONSET RED-ROPE Roofing rather than tarred felts — more satisfactory in every way — it has been the standard low-cost roofing for 25 years.

NEPONSET BLACK WATERPROOF Building Paper, under clapboards, shingles, slate, metal, etc., insulates against exterior heat, cold and dampness. It costs little and cuts the fuel bill one-third every winter.

NEPONSET FLORIAN Sound-Deadening Felt, for floors, partitions, etc., to deaden sound. Six times as efficient as ordinary deadening felt.

These are facts and not claims—write us and we will prove every statement

Consult Our Building Counsel Department

Tell us the nature of the buildings you propose to erect or repair and we'll send you the BIRD NEPONSET Book which treats your special case. There are dealers in BIRD NEPONSET PRODUCTS everywhere. If you don't know the one in your locality, write us and we'll tell you.

F. W. BIRD & SON. 501 Lottridge Street, HAMILTON, ONT.

Established 1795. Originators of Complete Ready Roofings and Waterproof building papers.
Winnipeg, 123 Bannatyne Street; Montreal; and 144 Union St., St. John, N. B.; East Walpole, Mass.; New York; Washington; Chicago; Portland, Oregon.

Feeding Brood Sow.

A. B., Sunbury Co., N. B.—I have a brood sow due to farrow in October. Her feed is mainly rape, and is housed in a 10x15 foot building with elevated bed-floor. There is a large out-door pen she is sometimes let out to graze for an hour. She does not seem to require ashes. She gets a small quantity of milk and an offer of water nearly every day. Is it better to give her some ground feed and how much. Have a mixture for gigs of 100 lbs. good middlings to about 80 of bran. Ought she to have some of this? Is it possible to over-fatten on a diet of rape? She fattens very easily and has already had two litters. Her second farrowing was difficult. I am anxious to get some advice as her mother died at third farrowing. Please advise.

Ans.—Your sow should do all right under present system of care and feeding. Allow her all the freedom you can so that she will get a sufficient amount of exercise to keep her in a healthy condition so that she may assimilate her food. Providing she has sufficient exercise we do not think she will fatten too much on rape. We would advise supplementing the rape and milk feed with a small quantity of the mixed feed referred to. We would keep water before her constantly.

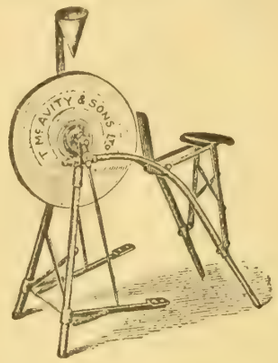
McAvity's Messenger.

On receipt of price we will deliver any goods in this advertisement, except Iron Pipe, freight, express or mail CHARGES PAID to your nearest railway station or express office anywhere in the Maritime Provinces.

This offer holds good only for a limited time and when ordering mention Dept. F.

Bi-Treadle Grindstone

Strong, Durable Steel Frame.

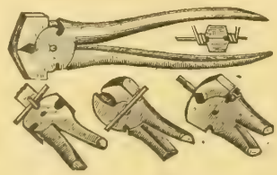


No need to have a boy turn this Grindstone. It runs like a bicycle. You sit down on the seat and work the treadles with both feet. Your hands are free to attend to the grinding of tools of all kinds.

It is shipped knocked-down, stone and frame crated together, stones about 22 inches in diameter, 2 inches thick.

Each.....$5.00

Combination Pliers



Ten tools in one, staple pullers, two wire cutters, two hammers, one pair pinchers, one monkey wrench, one wire splicer and one wire stretcher. A very handy and high-grade tool.

Each.....80c

Bread Makers

Make the wife's work easier by spending $2.25 or $2 75 for a Bread Maker. Mixes and kneads dough thoroughly in three to five minutes and makes perfect bread. Easy to work.

4-Loaf size.....$2.25
8-Loaf size 2.75

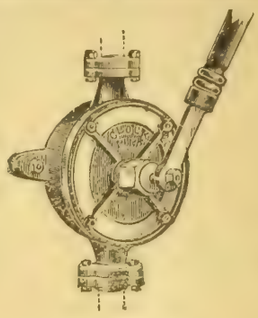


Fig. 583-A.

Eclipse Semi-Rotary Pump

Lift and Force

Powerful, acts quickly and easily.

No lost motion. Handy, efficient, reliable and durable.

Just the pump to bring water from a well or spring to your house.

No.	2	3
Suction Pipe, inches	1	1¼
Double acting, painted red, each	$4.50,	$5.50
Quadruple acting, painted blue, each	5.75,	7.00

McAvity's Wood Pumps

Anti-Freezing With Porcelain Lined Cylinder.

The most simple economical and durable Wood Pump made. They are well-known and in general use all over the country, giving universal satisfaction.

Prices of Pump and Pipe ready to put up for a well :

10 feet deep	$8.00
12 feet deep	8.40
15 feet deep	8.55
18 feet deep	9 00
20 feet deep	11.55
25 feet deep	13.20

We have Pumps for every purpose. Tell us your Pump problems and we will supply you with a Pump that will do the work.

We sell **Wrought Iron Pipe** for conducting water, plain and galvanized. All sizes carried in stock. Prices on application.

"Dandy" Cobbling Outfit

A complete outfit of tools and materials for boot, shoe and rubber repairing. It consists of 1 iron stand, 4 lasts, different sizes, 1 shoe-hammer, 1 shoe knife, 6 awls, 1 peg awl haft and wrench, 1 bottle each rubber and leather cement, 1 bunch bristles, 1 ball each shoe thread and wax, 4 pkgs. nails, assorted, 4 pairs heel plates, assorted sizes, 6 harness needles. Directions sent with each outfit.

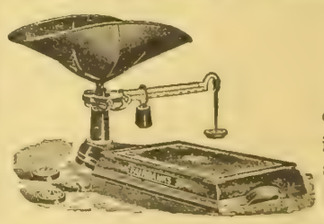
Complete.....$1.10

Climax Food Choppers

The real pleasures of home are enjoyed by the housekeeper who prepares food properly, serves it attractively and by her use of labor-saving devices, has time for other things.

The Climax Food Chopper chops all kinds of food, whether meat or vegetables, raw or cooked, as fine or coarse as wanted, rapidly and easily.

No.	51	52
Each	$1.25	$1.50



Union Scale

This scale is especially convenient for a large variety of uses, as it includes both a scoop and platform (10½ by 13½ inches) weighs ½ oz. to 30 lbs. in the scoop and up to 240 pounds on the platform. Has heavy tin scoop and single brass beam. Government inspection certificate sent with each scale.

Each.....$8.00

Send for copy of McAvity's Messenger, describing Cutlery, Guns and Ammunition

T. McAvity & Sons, Ltd., | DEPT. F. | St. John, N. B.

MARKETS.

St. John Prices.

GRAIN.—Oats,49c; corn meal, $1.60

LIVE STOCK.—Milch cows,$35 00 to $60 co.

DRESSED MEATS.—Beef (carcass) 6c to 10c; beef, (retail), 10c to 25c; mutton, 5c to 8c per lb; veal, 6c to 10c; lamb, 9c to 10c; pork, 10c to 11½.

DAIRY PRODUCE.—Creamery butter, 25c to 28c; dairy butter, 20c to 25c; cheese, 12c to 12½c.

POULTRY & POULTRY PRODUCTS.—Eggs, 20c to 25c; fowl, 60c to $1.10;chickens, 50c to $1.25; ducks, 70 to $1.20; turkeys, 18c to 24c.

FRUIT.—Apples, retail, 30c per peck; plums, 75c to 90 per bas.; cranberries, 12c qt.

VEGETABLES.—Carrots, 5c bunch; potatoes, 50c to 60c per bus; beets, 5c

MISCELLANEOUS.—Beef hides, 9c; calf skins, 15c; sheep skins, 25c to 40c; lamb skins, 35 cto 45c

Halifax Prices.

Fruits and vegetables easier. Pork and beef decline $1.00 bbl. Eggs advance 2 cts. doz.

Creamery butter, 25c to 26c; dairy tubs, pound, 22c to 23c; dairy rolls, 20c to 21c; dairy prints, 23c to 25c; eggs, new laid, 22c to 23c; cheese, 12½c to 13c.

Flour, hard wheat, per bbl., $6,75; flour Ontario, blends, per bbl., $6,00; rolled oats, $5.25; cornmeal, per bag, $1,70; oats, per bush., 52c to 55c.

Pork, Am., bean, per bbl, $26,00; pork, clear, per bbl., $28,00; hams, fresh, per pound, 16c; hams, smoked, per pound, 20½c; turkey, per pound, 17c; geese, pound, 20c; ducks, 20c; fowl, pound, 15c; beef, fore quarter, per pound, 8c to 9½c; beef, hind quarter, per pound, 10c to 12c; beef, American plate, bbl., $21.00; beef, Canadian per bbl., $18.50 to $20.00; lambs, pound, 11c to 12c; pork, pound, 10c to 12c; bacon, pound, 20c; mutton, per pound, 7c to 8½c, veal, per pound, 6½c to 8c.

New potatoes, bbl., $2 20; onions, Valencias, pound, 2½c; cabbage, native, crate, $1.25; lettuce, dozen bunches, 50c; tomatoes, Ontario, basket, 45c to 50c; tomatoes N. S., box, 40c; rhubarb, native, pound, 1½c; apples, Am., basket, $1.75; apples, Am., bbls., $4.00 to $4 50; apples, N. S., bbl., $1.25 to $3 50; turnips, dozen bunches, 50c; beets, dozen bunches, 50c; carrots, doz. bunches, 50c; celery, doz. bunches, $1.50.

FRUIT AND VEGETABLES.

Dealers report business still in good volume and collections fair. The trade in bananas is dropping off somewhat as is usual when our native fruits come to hand more freely.

The city market has been depending almost wholly upon Dartmouth farmers for new potatoes, but this source of supply is now stopped, owing to a very small crop.

Dealers are now drawing supplies from P. E. Island and Annapolis Valley.

A car of Ontario fruit has just arrived by freight, which has allowed our dealers to sell somewhat cheaper than usual, as this class of goods usually come by express at a much higher cost of transportation.

Tomatoes, both Ontario and Nova Scotia, are considerably lower at 40 to 55 cents.

Raspberries and American apples (in baskets) are done. American (barrels) and Nova Scotia are a little easier at $4,00 to $4.50 and $1.25 to $3.50 per bbl.

Ontario plums and peaches are quoted to-day at 60 cents box, and 75 cents a basket.

Among vegetables native cabbage are lower at $1.25 crate, and potatoes at $2,10 bbl.

Crop Reports.

W. J. CARSON, GREEN ROAD, CAR. CO., N. B.

The potato is the main crop in this section and the principle one throughout the county as the soil, in general is well adapted for growing tubers My idea is, that take one year with another, the farmer who has soil adapted for growing potatoes and applies itto potato growing, can compete financially with his neighbor, who has similar soil applied to the growing of some other crop. The potato crop is a speculative one. When I say speculative,I mean that the potato is a perishable commodity that is subject to the risks of early blight, late blight, rust, bugs and rot to which other products of the farm are not subject. Notwithstanding the extreme rotten condition of last year's crop and the ensuing low prices which brought in their wake very heavy losses to most of our farmers, this season found our men buying fertilizer and planting more potatoes than ever before, which is ample proof that all those who have soil adapted to potato growing, consider the potato one of the most profitable products of the farm Although last year brought complete failure so far as crop and prices were concerned, the previous seasons gave good crops and prices ranging from $1,00 to $1 75 per barrel and in many instances the yield was better than 100 barrels per acre, which gave the farmer a double, jes, more than a treble profit than he could have got per acre from any other ordinary crop,

The potato crop in this section promises to be fair, although the rust is quite general, but it cannot do much harm to the early planted fields. Owing to the late, wet spring and the consequent late planting, quite a large percentage of the crop will be damaged, as the tubers are not yet more than half grown. There is no rot noticeable as yet, except a very little in the Irish Cobblers. The weather is very dry and if it continues so, it will ensure us good, sound crop, but we do not look for much shipping before the 5th of September, when the prices will be fair.

Our hay crop is good, the best for a number of years, and it has been harvested in very good condition Oats are also good and harvesting is in full swing. The prices for hay and oats will be very satisfactory.

R. F. SMITH, EAST FLORENCEVILLE, N B.

The hay crop in this county has been the heaviest we have had for years, clover growing in large quantities, The crop has not been harvested in first class condition, although there will be a large quantity of good hay. The farmers use as much caution as they can in taking their heaviest clover and dark grades of hay for the feeding of their stock, that portion that was harvested in best condition has been set aside and will be marketed during the coming season.

The oat crop is also looking well and if it is harvested in good condition, will not only be good quality but good yield

Potatoes It is too early to give an accurate idea as to how this crop will turn out, the fields at present are looking well and we think there will be an average yield, some specimens which have already come to my notice cook well and seem to be free of disease of any kind.

Wheat is only a fair crop and rust has struck it in some sections, Other vegetabe crops are looking well and taking it altogether Carleton County will have, generally speaking, a very heavy crop.

DRAINING TILES WANTED.

R. Y. Tracey writes, I have started draining by open ditches and mean to use tiles for the laterals if I can get them at a reasonable price. I never see tiles advertised in the MARITIME FARMER. Are there tile works in the Maritime Provinces? Can you tell me of any one from whom I can buy tiles? I've had considerable experience in tile draining, in the west of Scotland years ago, I know its value.

EDITOR'S NOTE:—

Will some of our readers tell us where drain tiles can be procured in the Maritime Provinces.

EYEBRIGHT, J. H. G., CUMBERLAND, CO. N. S.

I am enclosing specimens of a weed which grows in our district and which is ruining our grass land by killing out the grass. Would you kindly tell me what they are and how to eradicate them,

The specimens sent are very dry and it is somewhat difficult to make an exact determination but I think it is Eyebright(Enphrasia officinalis) which is usually rather common along the sea coast in particular. It is not considered a bad weed but may sometimes annoy the farmer. It is usually got rid of quite easily by cultivation.

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain, Cures Spavin Lameness, Allays Pain Does not Blister, remove the hair or lay the horse up. $2.00 a bottle, delivered. **Book 1 D free.**

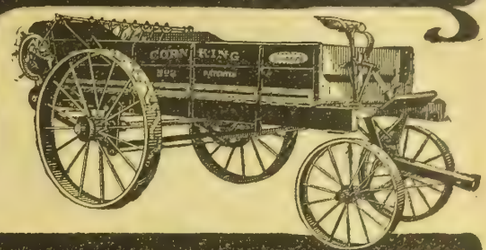
ABSORBINE, JR., (mankind$1.00 bottle.) For Synovitis, Strains, Gouty or Rheumatic Deposits, Varicose Veins, Varicocele, Hydrocele. Allays pain. Book free.

W. F. YOUNG, P.D.F., 124 Temple St., Springfield, Mass.
LYMANS Ltd., Montreal, Canadian Agents.

"Can be depended upon" is an expression we all like to hear, and when it is used in connection with Chamberlain's Colic, Cholera and Diarrhoea Remedy it means that it never fails to cure diarrhoea, dysentery or bowel complaints. It is pleasant to take and equally valuable for children and adults. Sold by all dealers.

Don't waste your money buying plasters when you can get a bottle of Chamberlain's Liniment for twenty-five cents. A piece of flannel dampened with this liniment is superior to any plaster for lame back, pains in the side and chest, and much cheaper. Sold by all dealers.

Better Crops-Bigger Profits Certain Results From Using IHC Manure Spreaders



THINK what it would mean to you to get a bigger, better, evener crop from every acre of your land.

Make the bare spots fertile—the rich soil even richer—thus increasing its value every year.

I H C manure spreaders are doing this for hundreds of other progressive farmers. Why not for you? They are the only practical solution of the problem of keeping your soil in such condition that it will always yield a bumper crop.

Barnyard manure is one of the cheapest and best of all fertilizers. It is something you always have in abundance, but—

To get its full value—to make it do its work as a fertilizer so as to bring the best results—you must spread it in the right way.

You can do this quickly and with greatest economy with one of the

I H C SPREADERS

CORN KING **CLOVERLEAF**

They are easily adjusted so you can apply the manure in just the amount required by the different conditions of the soil in different parts of the field Simply shifting a lever regulates the amount thrown out by the beater.

The beaters on I H C spreaders are correctly designed. They pulverize the manure—no large chunks are ever thrown out.

Light draft is another feature of I H C spreaders. They have wide tires and roller bearings.

The frames of I H C spreaders are made of non-porous, heavy, hard, resinous wood stock, air dried so that the sap is retained. Compare this with the kiln dried wood used in many. When wood stock is air dried the resin cements the fibres together making it practically impossible for manure liquid to penetrate. Manure acids have no effect upon it.

The Corn King Spreader is of the return apron type. Cloverleaf Spreaders have endless aprons.

Lime hoods for spreading commercial fertilizers and drilling attachments to distribute manure in rows can be furnished on special order if desired.

All spreaders look very much alike—but it's their work in the field that proves their value. Examine the record of the I H C spreaders, compare them with others and you will be convinced.

Ask the I H C local dealer for proofs. Go over with him the details of their construction. Choose a Corn King or Cloverleaf—whichever meets your particular need best. All are made in several sizes ranging from 30 to 70 bushels capacity. If you cannot get in to see your dealer right away, write nearest branch house for catalogues and full information.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A
(incorporated)

THE IHC LINE

LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY

Your complexion as well as your temper is rendered miserable by a disordered liver. By taking Chamberlain's Stomach and Liver Tablets you can improve both. Sold by all dealers.

The PUBLISHER'S DESK.

Gas generated by heat from black oil, a by-product of petroleum, used as a lubricant on bearings, and not smut in wheat, as generally believed, is the sole cause of explosions in threshing machines. The use of lard, castor or china-nut oil eliminates all danger of fire or explosion, no matter how much smut there is in the grain. That is the theory advanced by Silas Privett, of Colfax, Wash., a thresherman of 25 years' experience in the northwest, who has operated 10 years in the Palouse wheat belt, south of Spokane, where 27 machines were destroyed in a single season, a few years ago. Mr. Privett believes he has made a discovery which will re-

ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles, They are repeating Rifles, holding 12 cartridges, 42 calibre, in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game etc. No one living in the country should be without one of these rifles Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers. If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last. Don't delay, start to-day.

Address—**MARITIME FARMER, Sussex, N. B.**

sult in the saving of thousands of dollars a year to farmers and threshermen in the United States and Canada where smut is prevalent. Explaining his theory, Mr. Privett said that black oil produces explosions in the same manner they are created in a gas or gasoline engine. The heat generated by the bearings of the rapidly revolving machinery, upon which the petroleum product flows constantly while in operation, generates a gas, and when a spark, caused by the passing of a hard substance through the machinery or the striking of the cylinder teeth against the teeth in the concave, comes into contact with this gas, an explosion results. He added: "I have been studying this problem for years, but said nothing about it until after I had made a thorough investigation. As a result I am more convinced than ever that the majority of these fires, if not all of them, can be directly traced to the use of black oil. "I am not trying to put John D. Rockefeller out of business, but I wish the professors at the state colleges and experimental stations and experts would test my theory and see if there is not a real foundation for this theory. If they will make tests of this oil under the same conditions that are supposed to bring about a smut explosion, I am sure they will get an explosion without using smut. I began operating a threshing machine when I was 15 years of age and continued in the business for 25 consecutive years, and I do not believe that there is a man to-day in the country who has threshed any smuttier wheat than I have, yet I have never had an explosion, neither have I ever used anything but castor, lard or chinanut oil. I have also noticed that while there have been from 10 to 25 fires every fall in Whitman county, supposed to have originated from smut, there are three or four threshing outfits which have threshed theough the same kind of grain season after season without any fires. I also know that the men having charge of these machines will not allow anything but castor or lard oil to be used. Two points in Mr. Privett's theory are borne out by the so-called smut explosions in the Palouse county. One is that while threshers have been handling smutty wheat in the district for years without explosions, when the fires did begin not less than 27 machines were destroyed. The second is that neither before the epidemic of fires nor since that time has a machine on which castor or lard oil was used been known to generate fire in its interior, while those on which black oil was used were destroyed by fire with alarming frequency.

HORSEMEN ATTENTION!

Dr. J. Woodbury's Horse Liniment and Dr J. Woodbury's Condition Powders will save and preserve the life of your horses. They cure Cough, Cold, Distemper, Colic, Glanders, Spavin, Pink eye and all diseases of the Horse.

TRURO, N. S.

Dear Sirs,—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse liniment. The cough was of twelve months standing. In my large expeience with horses, I consider this liniment to be the best made for all diseases of the horse, and I recommend it to my friends.

E. J. ANDERSON.

BEAR RIVER, N. S.

DEAR SIRS,—

We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it.

Yours truly,

CLARKE BROS.

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad. as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. McLEAN & SONS, Hopewell, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS , Galt, Ont.

BUYERS OF DRESSED PORK.—We can take delivery from now out, 100 to 300 pounds each. Prompt returns.—JOHN HOPKINS, St. John, N. B.

$2.00 TO $5.00 A DAY SURE —Pleasant honorable work at your own home, for man or woman. No experience or capital necessary. Our company with ample capital will furnish work and plans absolutely free. EDW. McGARVEY, Manager, Toronto, Ont.

FOR SALE.—Two hundred acres of land, part in good cultivation, with or without crops, two acres in fruit trees. Near post office, school, R. road. For further particulars, apply to CHAS. E. NICKERSON, Gardners' Mills, Yar. Co., N.S.

DAIRY AND STOCK FARM FOR SALE.— Three miles from Sussex, 300 acres, 200 acres under cultivation, large intervale, cuts 80 tons hay. Good two-story house heated by furnace, water pumped by windmill, good barn.— HARVEY B. PARLEE, Sussex, N. B.

THREAD POWER FOR SALE.—One second hand two-horse Moody thread power for sale cheap. First set of planks still on the machine Write POWER care of MARITIME FARMER, Sussex, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

BERLINER GRAMAPHONE FOR SALE — First-class order. Company's guarantee not yet run out. This splendid instrument, costing sixty-five dollars, will be shipped, with over twenty dollars' worth of fine records for thirty dollars cash. Write GRAMAPHONE, care of MARITIME FARMER, Sussex, N. B.

Calves Raise Them Without Milk
Booklet Free
A. A Archibald & Co ,Truro, N. S.

Dyke View Farm!

We offer for sale Guernsey Heifer, two years old in July, and Calves, also one Bull, 18 months old, that is a direct decendant of Sheet Anchor and Cassipia, second prize cow at the Pan America Model Dairy, also Bull Calf, six months old, Agricultural Societies please note.

WILLIAM COX & SON,
Long Distance 'Phone, Canard, Kings Co., N. S.

TradeRelations of Canada and Jamaica

As briefly announced in yesterdays issue of the "Gleaner", Mr. E. B. Elderkin of Amherst, Nova Scotia, a representative of the Canadian Department of Agriculture particularly the Live Stock branch is now in this island having arrived by the Royal Mail steamer Sarstoon from St. Kitts.

Interviewed yesterday at Myrtle Bank Hotel by a "Gleaner" reporter Mr. Elderkin said. "My visit to the West Indies is for the purpose of discovering the possibilities of trade in live stock particularly blooded animals, between Canada and these islands. I left Canada in May this year and have visited Montserrat, St Lucia, St. Vincent, Barbados, Trinidad, Demerara, Dominica, Antigua, and St. Kitts. I came on to Jamaica from the last named place in the steamer Sarstoon and from here I go back to Canada.

"The climatic conditions of Canada are very favorable for the development of animals of constitutional vigor and consequently more able to resist climatic changes such as those that occur between the West India Islands and Canada. We produce all the leading breeds of beef cattle, dairy cattle, draft and carriage horses, best breeds of sheep and swine and all the utility breeds of poultry. Canada is wonderfully free from disease, and the animals are exceedingly healthy. The live stock branch, under the guidance of Dr. J. G. Rutherford, is making every effort to stimulate the breeders in Canada to produce the highest ideals in type of the various animals that they are breeding, and the effects of this education can be seen all over Canada to-day. Almost all the leading breeds of animals are bred in the Maritime provinces of Canada and being so close to the seaboard that the internal transportation of animals coming to the West Indies is very small. It is expected that in the near future increased transportation facilities will be provided, which should bring these West Indian islands and Canada in closer touch with each other.

"I have been exceedingly gratified with the reception I received in the places I have visited, both from the Government officials and private individuals, and the prospects of trade are good. The citizens of these islands realize that to keep up the strength of their herds and flocks it is necessary to import new blood in the way of sires, and they have expressed to me their intention of purchasing in the future in Canada. And there is no doubt that they can be supplied with quality equal to any other part of the world, and at prices plus expenses that will land them down here at less cost than they can be purchased elsewhere. I have been able to give the names of breeders in Canada of dairy cattle, beef cattle, sheep, swine, poultry of various kinds and horses, with whom they can correspond and who are absolutely reliable and have reputations for straight-forwardness to sustain.

"This morning I had the pleasure of meeting the Hon. H. H. Cousins, the Director of Agriculture, who very kindly showed me over the Hope Gardens and the animals he has at the Farm School. I am sure that your Government and colony are to be congratulated on having a gentleman occupying this important position who brings to bear upon it the enthusiasm of Mr. Cousins and a determination to make it a success. I judge that he has been liberally supported financially by the Government, and I am sure, from what he outlined to me of his intentions for the future that no money expended will give a larger return and do more for the up-building of the island.

"Through the kindness of the Administrator of St. Kitts, the Hon. T. L. Roxburgh, C. M. G., I have got letters of introduction to some of the pen-keepers here—gentleman at Mountpelier, Ochio Rios and Mount Plenty. On Monday or Tuesday I propose going up in those districts and spend the week there sailing from Port Antonio on Saturday 27th inst., in the Pickford and Black's steamer Amanda for Halifax, N. S.

"These islands," concluded Mr. Elderkin, "are the natural compliment of Canada. They produce that which Canada cannot, and Canada produces those things which these islands need. And with good transportation facilities there should be a large volume of business that would operate to the advantage of both. Each owing allegiance to one flag under which all our liberties are guaranteed, there should be a oneness of purpose to develop these over seas dominions so that they could take their proper place in this grand empire of which we are a part." — Gleaner, Kingston, Jamaica.

If any of your farm wagons need new wheels don't use wooden wheels again. Put on Dominion Low Wide-tire Steel Wheels They are cheaper, lighter and stronger than wooden wheels Guaranteed not to break in coldest weather or on rockiest roads. Wide tires save roads, and make pulling easier for horses. Will last a lifetime. Made to fit any axle. Pay for themselves first season.

The Dominion Handy Wagon saves half your labor and time in loading and unloading. Wide tire, low wheels save roads and horses. Parts are arranged for easy draft. Saves its own cost first season, like our Low, Wide-tired Steel Wheels. Write for free booklet.

Dominion Wrought Iron Wheel Co.,Ltd.
Orillia, Ont.

MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, 14th October, 1910, for the conveyance of His Majesty's Mails, on a proposed Contract for four years 3 times per week each way, between Newtown and Sussex from the first of January next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office Newtown, Sussex & route offices and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, 27th August, 1910.

Our New Catalogue is ready for distribution.

Send Name and Address for a Copy.

THE ST. JOHN BUSINESS COLLEGE

S. Kerr, Principal.

Perfection Ideal Band

It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

Not a minute should be lost when a child shows symptoms of croup. Chamberlain's Cough Remedy given as soon as the child becomes hoarse, or even after the croupy cough appears, will prevent the attack. Sold by all dealers.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN.

Official Organ of The Farmers' and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and The Maritime Bee-Keepers' Association.

Volume 15. Sussex, N. B., September 20, 1910. Number 24.

THE DOMINION EXHIBITION.

THE first exhibition, in the 1910 Maritime Province circuit of fall fairs, was held from the third to to the fifteenth of September, in the city of St. John, the winter port of New Brunswick.

The official opening took place in the large amusement hall over the transportation department, where a large audience assembled to hear the opening addresses, savoring so much of future bright prospects for the Winter Port city, by Hon. Wm. Pugsley, Sir Robert Peaks and others.

Despite the fact that the weatherman was not at all in a kindly mood and sent rather cold winds and clouds laden with rain on several days, the turnstiles clicked their merry tune from early morn until late at night when it was not uncommon to find, at the close of the day, when the grand totals were taken, that upwards of twenty thousand visitors had thronged through the main building, and out over the grounds and in and through the agricultural and transportation halls and poultry and live stock buildings.

Fakirs were there in abundance but one of the commendable arrangements in regard to this motely mass was that they were so placed that the visitor who did not wish to patronize them or listen to their jab ber need not go their way as they were placed to the extreme right of the grounds behind the grand stand building.

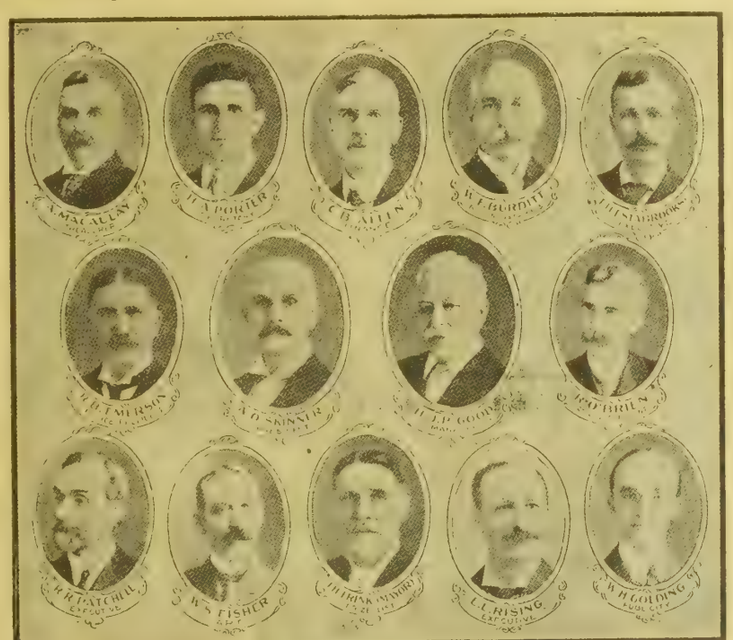
President Skinner, Manager Good, Secretary Porter, the various members of the office staff as well as the superintendents of the various departments and special police did everything in their power to make matters easy and pleasant for the various exhibitors without resorting to any unpleasant officiousness.

The judges did the work in their respective departments without partiality, fear or favor and although there was more or less dissatisfaction in regard to certain awards, they were only cases where the losing exhibitors could not see eye to eye with the judges and no one offered to remark that the judges were not conscientious in their work.

IN THE MAIN BUILDING

were found exhibits from many of the Maritime Provinces' most progressive manufacturers and dealers. The arrangements throughout was neat and attractive and a capable staff of attendants and assistants kept everything in ship shape.

With the exception of the interesting exhibit made by the British West Indies, which showed some of the resources of these wonderful islands, and a few minor exhibits, the display in the main building, in reality, was not representative of Canada's vast dominion. It was, however, a good representative of our Maritime industries. We would look for more exhibits in the manufacturers' lines from the sister provinces at a fair of such dimensions as the Dominion official exhibition.



The Men Who Made the 1910 Dominion Exhibition.

The educational exhibits in the Domestic Science and Manual Training departments as well as the ladies fancy and art work were much admired and showed that skill which the hand acquires when carefully trained. The work done by some of the boys and girls in our schools, as shown at St. John, would put to shame the work of some reputably clever mechanics. The Art Room was thronged with visitors who could not help admiring the excellent pictures and other works shown. Some of the pictures were of historic interest.

H. A. Lyman, St. John; Alfred F. Hiltz and E. L. Jarvis, St. John, had exhibits of cut flowers. The best collection was shown by A. E. Hiltz, Bridgetown, N. S.

IN THE TRANSPORTATION HALL.

Carriages, Automobiles, and Gasoline Engines were the principal exhibits.

THE NEW AGRICULTURAL HALL.

presented an interesting scene. S. L. Peters the veteran exhibitor of Queenstown, was in charge.

At the extreme rear was found a splendid display of the products of the Experimental Farm, Nappan. The products were artistically arranged and Mr. Robert, the genial son of the farm superintendent, was in charge to answer questions and give any desired information in regard to the various features of the exhibit.

The tables were heavily laden with the products of fields, farms, gardens and orchards. The quality of the various exhiqits was excellent. Roots, grains and vegetables were judged by Messrs. S. J. Moore, and J. C. Cote, Maritime and Quebec representatives, respectively, of the Seed Division, Ottawa.

COUNTY EXHIBITS OF FRUITS, GRAINS, VEGETABLES, ETC., had entries from Victoria, York, Kings, Albert, Charlotte and St. John Counties, and won awards in the order named. Donald Innis had charge of and grew most of the Vic. Co., first prize exhibit products.

The principal exhibitors of sheaf grain were, Donald Innis, Orin Hayes, F. E. Henderson, George W. Foster, Eben Scribner, A. R. Gorham and B. F. Chesley. The 1st award for best exhibit of sheaf grain as well as second award on grain went to Orin Hayes, Sussex. Donald Innis had the best collection of grain. In the class for Field Roots, Messrs. O. W. Wetmore, B. Goodspeed, F. B. Waters, L. B. Jordan, F. V. Hamm and Orin Hayes competed. The first honor for best collection went to B. Goodspeed, Penniac, N. B., closely followed by Orin Hayes in second place and B. F. Chesley, Clarence, N. S., came in for third award.

O. W. Wetmore, Clifton, N. B., had the best assortment of potatoes and B. Goodspeed and B. F. Chesley won second and third awards respectively.

In garden vegetables B. Goodspeed won the sweepstake prize for best collection and F. B. Waters, Loch Lomond, N. B., had the third place collection.

B. Goodspeed won the first prize for best exhibit of field roots and garden produce, and second prize for best exhibit of potatoes grown exclusively upon the fertilizers of the Provincial Chemical Co., St. John. In the latter classes, Orin Hayes and B. F. Chesley won second and third places respectively.

The Messrs. W. Altie Burpee & Co., seedmen, of Philadelphia, special prize of $20.00 for best and largest collection of vegetables grown from Burpee's seeds was won by B. Goodspeed.

O. W. Wetmore, B. Goodspeed and S. L. Peters won first, second and third places respectively, in the Bowker Fertilizer Company's specials for best collection of potatoes and roots grown on Bowker's fertilizers.

The Sussex High School and the Hampton Consolidated School were the only contestants in the School Garden Produce Class, and won first and second places in the order named. Both of these exhibits were very creditable and although five schools did not compete, we believe the schools should be encouraged in their good work by awarding them the full fifty dollars instead of the paltry sum of $10.00 and $5.00, which was won by the respective schools and which would hardly cover expenses, to say nothing of leaving a surplus for the purchasing of books on rural subjects for the school libraries. The prizes for the best display of products grown on the pupils' individual plots all went to pupils of the Hampton School.

THE FRUIT

was judged by George H. Vroom, the chief Inspector for Nova Scotia, of the Fruit Division, Ottawa. He found a lot of good, sound, clean, well matured and nicely colored fruit, which was a further assurance that New Brunswick can grow fruit. H. D. Johnson, B. F. Chesley, G. N. Banks and H. A. D'Almaine were over from Nova Scotia with a large assortment of varieties. Albert, Kings, Sunbury and Victoria coun-

ties were the only counties showing county collections of fruit. The sweepstakes prize collection was shown by S. L. Peters, Queens Co., who also won the Bank of Commerce special for best collection shown by a New Brunswick fruit grower. B. F. Chesley had the best collection from Nova Scotia.

S. L. Peters also won first award in the classes for best collection fruit in natural condition, and best collection small fruits shown in glass.

HONEY AND BEE SUPPLIES.

In this class, Wilfred Todd, Milltown, N. B., made a good display in the respective sections of the class and carried off practically all the awards. A demonstration in the handling of bees was given in a netted wire cage close to the above exhibit.

The New Brunswick Government had an exhibit of general interest to sportsmen. It contained specimens of salmon and trout in tanks, a family of live muskrats, a family of live beavers, a fox and a moose as well as stuffed specimens of the various species of wild animals and birds found in the province. There was also a log house which was very [illegible]onstructed. Close to this ex[illegible]s a display of minerals in[illegible] of the New Brunswick miner[illegible]arch.

HORSES.

The horses were stabled in the old box stalls on opposite sides of the new cattle, sheep and hog barns. There are a great many good horses in Canada but very few of them were shown at the Dominion fair. There were a few good ones but not enough of them to make the stranger within our gates enthusiastic over Canadian horse flesh.

THOROUGHBREDS were shown by Geo. W. Fowler, Sussex, N. B., and A. A. Laffie, St. Stephen, N. B.; Norman L. McLeod, St. John; Hartland Poultry Yards and The Canadian National Bureau of Breeding, Montreal. George W. Fowler's Waterlight, first as stallion, four years old and over, was champion stallion any age, followed in his class in second and third placed by Ostrich and Logan shown by the Canadian National Bureau of Breeding.

The Hartland Poultry Yards won on brood mare and foal, of 1910 [illegible] as on the progeny of Thor[illegible] mares imported from Ken[illegible] sold by the New Bruns[illegible]ament in 1909.

STANDARD BRED HORSES.— W. J. Alexander's Dan Gilbert, R. A. Snowball's Karaquilin, and Alexander Clark's Reps. de Monbells were up for honors in the aged Standard Bred Stallion class. The red, the blue and the white were placed in the order named. H. R. McMonagle won the first award on two-year-old filly, first on yearling filly and first and second on mares four years old and upwards, in harness.

Alexander Clark had the only brood mare with foal and foal of 1910. S. T. Lamb, Perry Point, N. B., won second prize in the two-year old filly class on Bonnie Jean.

HACKNEYS were few in numbers but the quality throughout the class was good. T. B. McAulay, Hudson Heights, Que., and R. A. Snowball, Chatham, N. B., were the only competitors. McAulay's Lucifer was the stallion shown in the four-year-old class and Model Performer, R. A. Snowball's three-year-old stallion had no competition in his class. In the one-year-old stallion class Snowball's Cock-o'-the-North won the coveted red from McAulay's Matthias II, which is quite an honor for the lusty youngster, as Mathias II. was never beaten before. McAulay's Lucifer carried off the diploma for best stallion, any age. Lucifer was sired by Copper King, champion at the English shows two years ago. His dam was by Goldfinder, a champion English mare. Mathias II. is a colt of wonderful action. He is of inbred breeding as both his sire and dam were the get of Matthias.

Snowball led the way in the yearling filly class with Langton Belle, in competition with McAulay's Royal Ophelia II. by Royal Ophilian out of Cymbal a daughter of the great Matthias.

McAulay's Ophelias Heiress, a daughter of Polonius, twice champion at Ottawa and Sherbrooke won both medals offered by the Canadian Hackney Horse Society for best mare any age and height, shown on the line and in harness with suitable vehicle.

Snowball's Langton Lilly was first in the brood mare with foal by her side class. Her foal by Model Performer was second in his class.

McAulay's first prize foal, by Lucifer out of Cymbal was consider by onlookers and the judges to be one of the sweetest foals on the grounds. He has wonderful action and conformation and will undoubtedly be heard from in show ring records.

Ophelia's Heiress and Ophelia's Fashion, two of McAulay's mares

Where the first St. John Exhibition was held
Compare with a cut of the present buildings which appeared in a recent issue.

were first in their respective classes for single actor or high stepper 15.2 hands or over and under 15.2 hands, as well as for matched pair high steppers.

CARRIAGE & COACH HORSES —W. J. Alexander, H. C. Jewett and W. H. Keys were up for honors in the aged stallion class with Onyx, Galloway and Danais respectively, and won in the order named. Onyx won the diploma for best stallion any age.

Hugh Payne, Hillsdale, N. B., had Romp Walks, the only stallion in the two-year-old class. R. T. Hawkes, Bartibogue, N. B., won first on brood mare and foal of 1910 without competition. DeB. Carritte, St. John, won first in the single carriage horse in harness as well as the silver cup donated by Mr. George McAvity lor the best carriage horse bred in New Brunswick.

ROADSTERS.—Orin Hayes, with Nellie F., and her foal by Buz Fuz, won first prizes, without competition in the classes for brood mares and foals of 1910. John F. Frost, Hampton, had the only entry in the three year old filly class.

CLYDESDALES.—The strongest competition in any one of the horse classes came into the ring when the Clydesdales put in an appearance and some horses of very good quality were shown. Mr. George Gray, Newcastle, Ontario, placed the awards in this class as well as in the other heavy horse classes. In the four-year old stallion class, T. B. McAulay's Lord Aberdeen, H. C. Jewett's Sorbie Boy, Logan Bros.' Handy Andy and H. R. McMonagle's Stanley faced the judges and received their awards in the above order.

The battle royal in the three year old stallion class was between R. A. Snowball's Brown Balgredden, Treadwell-Hoben Co's. Provost Wright and H. R. McMonagle's Royal Baron's Pride. The awards were placed respectively as named.

H. C. Jewett's Scottie Baldwin by Sorbie Boy was the only stallion in the two-year-old class.

Logan Bros.' Labari Again was first without competition in the yearling stallion class.

Winsome Bessie, an imported mare, shown by John B. Barton, Welsford, N. B., had no competition in the three-year-old filly class.

Logan Bros. had two mares in the two-year-old filly class and won first and second prizes over C. P. Blanchard's Woodburn Marchioness by Montrieffe Marcus.

Logan Bros. with Rose of Homestead had no competition in the one-year-old filly class.

R. A. Snowball's May Lothian and Marinetta won first and third places respectively on brood mare with foal by their side. While Logan Bros.' Soubrette won second award.

Logan Bros. had the first and third prize winners in foals of 1910, and R. A. Snowball had the second place winner.

Snowball's May Lothian captured the coveted honor of Diploma for best mare any age, for best Clydesdale female, any age, bred in Canada and with her mate Martinetta, won first for pair of Clyde mares. Logan Bros. were close competitors in the latter class.

Baron Belgredden the first prize three-year-old stallion received the Clydesdale Association of Canada's sp?cial prize for stallion any age.

PERCHERON. — Mathurin, Glaneur, and Seapin, shown by W. H. Fowler, St. John, Jamieson & Walker, Sussex Corner and D. W. McKenzie in the aged Percheron stallion class won the red, blue and white ribbons in the order named. The former winning diploma for stallion any age. Chas. Symes, Minudie, N. S., had no competition with his one-year-old stallion, Lord Roberts, as well as first prize with Distinguee, on Filly, 3-years-old or over.

Geo. F. Mayes, St. John and Geo. Chamberlain, St. John, had the only entries in the brood mare and foal of 1910 classes.

GENERAL PURPOSE.— Jas. Barrett & Sons, Crouchville, captured the Silver Cup presented by the Bank of New Brunswick for the best general purpose or agricultural horse in the Mariti e Provinces, weighing between 1250 pounds and 1500 pounds.

COMMERCIAL.—The Commercial class, particularly the section for heavy express or general delivery, was a mixed multitude containing quite a number of horses that rightly belonged to the lighter class of express horses. James Pender won the first prize on an outstanding winner followed by two Dominion Express horses in second and third places.

In the lighter class of express or delivery horses, Geo. B. Taylor, St. John, and F. E. Williams, respectively won first and second places.

The light horse classes were judged by Dr. J. S. Standish, Truro, N. S., in his usual efficient manner, while George Gray, Newcastle, Ontario, distributed the honors in the heavier classes.

BEEF CATTLE.

The beef breeds were few in point of numbers but many of them were of excellent quality. Visitors to St. John fairs, on previous occasions, have had an opportunity to review more and fully as good individuals as were shown this year. Several breeders that have been showing in former years were conspicuous by their absence and it looks as though W. W. Black with his Herefords and Messers. C. A. Archibald and Snowball with their Shorthorns are the only Maritime breeders who are interested enough in the breeding of beef cattle to bring their stock to the Dominion Fair where the public could see their excellent stock.

We do not know why beef breeds were not represented by Ontario and Quebec breeders. Perhaps the prize list was not heavy enough or perhaps inducements in the form of an offer to equalize freight rates up to a certain distance was not held out to them. Anyway, they did not come and they were missed.

HEREFORDS.—W. W. Black had the only herd of Herefords and needless to say they were out in their usual good form. The champion male was the aged bull, Rupert 4th of Ingleside, and the champion female was the two-year-old heifer, Sylvan of Amherst.

SHORTHORNS.—The battle royal in Shorthorns was waged between the Snowball and Archibald herds. The Snowball herd was represented by nine good individuals, four of which were calves. Archibald won the Senior and Grand Championships on bulls with Orange Prince, shown in the three-year-old section. Orange Prince was bred by Hon. W. C. Edwards, of Ontario. All the female championships went to the Archibald herd as follows:—Senior and Grand Champion female, Merrymaid; Junior and Reserve Grand Champion female, Mermaid, a grand-daughter of old Merrymaid. Another Merrymaid calf came in for Junior Reserve Champion female. The first

prize on aged herd and on young herd as well as first and third awards for cow and two of her progeny went to the Archibgld herd; the latter on Merrymaid III., granddaughter of the original Merrymaid. It is worthy of note that at the time of the first fat stock show in Amherst, the original Merrymaid, although only a calf, won the championship, in her class, which elicited some criticism of Prof. Day's judgment in placing her first. Her winnings at subsequent shows as well as the standard of excellence in uniform good qualities of her progeny has more than proved Prof. Day's good judgment, a judgment which in this case was one of which he need not be ashamed.

The Snowball herd carried off the palm for Junior Champion and Grand Reserve male with Scottish Clipper and junior reserve champion male with Chatham Clipper shown in the senior yearling and calf classes respectively. Both the Archibald and Snowball herds were out in good fit and the winnings of the respective herds will be found in the published list of awards on another page.

The Silver Cup, for best Shorthorn bull in the Maritime Provinces went to Archibald's Orange Prince. It is regretted that some of the Western breeders did not see their way clear to exhibit at St. John. Every year thousands of dollars go from the Maritime Provinces to the Western Provinces and we would like to see farmers who are so situated as to be able to carry on the beef raising industry, stimulated to better efforts towards capturing some of the money that we now, through necessity, send to our brother farmers in the West, in order to supply the demand for good beef.

BEEF GRADES.—W. W. Black, Amherst, had everything his own way in the beef grade class, with a nice uniform lot of Hereford grades. Wm. Robertson, Amherst, was his only competitor, the latter winning second place on Cow, 4-years-old and upwards, with a grade Shorthorn.

FAT CATTLE were few in numbers. There again W. W. Black carried off all the most valuable awards. John McDonald, Jr., St. John, showed a few Shorthorn steers but their quality did not come up to that of the Herefords so they had to take some of the inferior awards.

DAIRY BREEDS.

The unaminous verdict of all those who visited the show ring and the cattle barn at St. John was that the dairy cattle section was the strongest point of the show. There were active, attractive looking Ayrshires, some beautiful Holsteins, Jerseys in abundance and two herds of Guernseys.

In the dairy classes, the magnificient herd of Ayrshires and the splendid herd of Jerseys shown respectively by P. D. McArthur, North Georgetown, Que., and B. H. Bull & Sons, Brampton, Ontario, saved the situation from being a purely Maritime show.

While there are not a great many French Canadian cattle in the Maritime Provinces, there are a great many herds of this useful breed in the neighboring province of Quebec, and it is regretable to think that the management of any Canadian Dominion Exhibition should be so short sighted as not to provide a place for the only practically breed of cattle, native to Canada, in their prize list. This was a short sightedness for which there is no excuse and we feel confident that had there been a place for French Canadian cattle a creditable showing would have been made.

The new stables are conveniently arranged and are so arranged that one can see every animal in the building. There is a good watering system and a number of litter carriers are provided which make the work of keeping the stables clean a fairly easy matter.

AYRSHIRES were strong in numbers and in point of quality. McIntyre Bros., Sussex, N. B.; M. H. Parlee, Lower Millstream, N. B.; Retson Bros., Truro, N. S., and C. P. Blanchard, Truro, N. S.; James Barrett & Sons, Crouchville, N. B.; S. Creighton, Silver Falls, N. B., and Chas. Symes, Minudie, N. S., were out with their best, which means that go where you will in Canada, you will not find better quality. Six aged bulls faced the judge, W. W. Ballentyne, Stratford, Ontario, and they were all good ones. The coveted red as well as Senior and Grand Championships went to P. D. McArthur's Netherall Milkman, a champion at Ottawa in 1909 and at Sherbrooke in 1910. He also was first with three of his get, Cherrybank Milkmaid, Cherry Bank Cicero and Cherry Bank Queen, thus repeating his Sherbrooke winnings. The first prize for Senior Bull Calf went to McArthur's Sir Walter. The third prize junior bull calf shown by McArthur, remains in the Maritime Provinces having been purchased by S. Creighton, Silver Falls, N. B. This young bull carries his sires depth and top line and should prove a good stock getter.

The other winnings of the McArthur herd were on such cows as Amaryllis of the Willows in the dry, four-year-old class, Prim of the Willows in the three-year-old class, Luna of Cherry Bank and Cherry Bank Jean in the two-year-old cow class and Carolina of the Willows in the two year heifer class. Cherry Bank Milkmaid, a senior yearling heifer and daughter of the champion bull was junior champion and reserve grand champion female. At Sherbrooke she captured the grand championship.

Little Gem of Elm Shade with her daughters Cherry Bank Jean and Cherry Bank Queen, first in the cow and two of her progeny class at Sherbrooke, again won the same honor at St. John. Little Gem of Elm Shade put up a very creditable showing although milking since last December. During the first three and one-half months of her last lactation period she gave 4042 pounds of milk testing 4.1 per cent. butterfat. Come again McArthur.

M. H. Parlee, Millstream, had his Maple Grove Herd out in full force. Lord Dudley of Spruce Grove, the veteran winner was found, when judgment was delivered, next to the red ribbon winner in his class. Despite his age Dudley shows up well and looks good enough for many more years of useful service and was given the senior reserve championship. The junior reserve male championship also went to the Parlee herd on Morton Main's Amanth, a spicy junior yearling. Culcaigrie Hilda, a typical Ayrshire carrying a good udder waltzed to the head of the class in the aged cow class and carried off the senior and grand female championships. The fattest plum for Canadian bred cow, three years or upwards went to Parlee's Grace Darling of Spruce Grove. The third prize for aged herd, the second prize for breeders' young herd and the third prize for bull and three of his get, as well as second prize for cow and two of her offspring were other important winnings by the Maple Grove Herd.

Retson Bros. were over from Truro with a lot of useful Ayrshires. They showed a particularly nice two-year-old cow, although she is perhaps a little under size which may be accounted for by the fact that although so young a cow she is in her second lactation period. She carries a very large udder for her size. She was shown late in the afternoon and her udder being so full did not help her show to the best advantage. She pushed hard for first honors but had to take second place.

C. P. Blanchard, a young breeder of Truro, made his debut at St. John, with an excellent lot of Ayrshires that are a credit to one so young in the business. He has already made one importation from Scotland and will be heard from at future shows. His herd is headed by Special Spice, an imported bull out of Howie's Champion bull, Spicy Sam, one of the best breeding bulls in Scotland. Blanchard led the way in the three-year-old cow class, with Sunnyside Spot, a Canadian bred cow and an outstanding winner in her class. In the dry three-year-old class Blanchard was again an easy first with Borrowmoss Moss Rose IV., imported recently from Scotland. Another Blanchard imported senior yearling heifer, Howies Bright Lady II., was second in her class and junior reserve champion. Chas. Symes, had the third prize two-year-old cow. S. Creighton, Silver Falls, had the third prize aged cow, the third prize Canadian bred cow and the fourth senior yearling heifer. He has purchased a new herd header and he will be out stronger than ever when the next St. John exhibition takes place.

James Barrett & Sons, proprietors of Hill Grove Stock Farm, Crouchville, N. B., were out in full bloom with twenty typical head of Ayrshire cattle. Their herd is headed by Cherry Bank Sunrise, who won first in the two year old class and is a son of the unbeaten champion of America, Barcheskie Kings Own (Imp.) that is known to Ayrshire breeders throughout the world. They won 2nd place in the three-year-old class in milk on Scottie of Stockwood, a grand young cow whose dam won 1st at Ottawa last year for the best Canadian bred cow, she also won 2nd for the best Canadian bred cow, following in the footsteps of her mother. They won 2nd place in the dry three-year-old class on Pearl of Silver Falls, a cow of splendid Ayrshire type and has proven to be a heavy producer. In the junior yearling class they won 2nd on Lady Marguerite of Hill Grove, a very promising young heifer; 2nd in the senior calf class on Hill Grove Dairy Maid, a very strong calf. They won 4th in the senior bull class on Hill Grove Pearlstone, a grand young bull of the deepest milking strains, which ought to be a great stock getter. They also won third place for the breeders' young herd which was headed by Pearlstone. Messrs. Barrett have been breeding Ayrshire cattle for the past few years and the result of their creditable showing in the ring goes to show that they have in their herd animals to breed from fit to win in competition. Owing to their extensive milk route in St. John they will be unable to take in the fall shows as they require their milk to supply their city trade. The Hill Grove herd were winners in every class in which they had entries.

McIntyre Bros., were out with their magnificent string of producers. Although their aged bull, Whitehill Sunrise went down to third place in his class he, with three of his get, gave the winner of the red ribbon a run for his money, and was good enough to head the first prize aged herd when backed up by such grand females as White Lady, Morton Main's Lady Nelly, Orange Lily and Rose of Spring Brook. McIntyre Bros. imported, junior yearling bull was first in his class, junior champion and grand reserve champion as well as the head of the first prize breeders' young herd. In the class for cow and two of her progeny McIntyre Bros., White Lady, the senior reserve champion female carried off first honors. The Silver Medal donated by the Bank of Commerce, St. John, N. B., for the best herd of dairy cattle consisting of four females, over two years old was captured by McIntyre Bros.' herd. In winning both the herd prizes McIntyre Bros. show that they have a class of Ayrshires that are so uniform in quality that it takes some competiton to get ahead of them.

For the other winnings of the respective herds the readers may look over the list of awards on another page.

Guernseys.—Owing to a discrimination against Guernseys, in the amount of money offered in their class, and which the additional paltry amount subsequently added did not satisfactorily rectify all the Guernsey breeders with the exception of Roper Bros., and James Roper & Sons, Charlottetown, refrained from showing. Why not put the Guernseys on an equal footing with other breeds at Dominion exhibitions and particularly so when it is held in the Maritime Provinces, the Guernsey stronghold of and the seat of the Guernsey Association in Canada?

All the championships with the exception of junior reserve championship went to Roper Bros. Both these herds were out in a creditable condition and good enough to demonstrate that they were just as well entitled to a full prize list as any other dairy herd. H. G. Clark, Georgetown, Ontario, placed the awards.

JERSEYS.—Robert Robinson, Sussex, N. B., H. S. Pipes & Son, Amherst, N. S.; Josselyn & Young, Silver Falls, N. B., and James E. Baker & Sons, had their best stock at St. John to lock horns with B. H. Bull & Son, Brampton, Ontario.

Despite the good quality of the Maritime herds, the Ontario herd made matters lively for them and carried off a great many of coveted first prizes.

Mr. H. G. Clark placed the awards.

The Brampton herd carried off all the male championships with the exception of that on junior reserve champion male which went to H. S. Pipes & Son, on Chief Financier, a senior yearling calf. In the female class again won all the championships with the exception of senior reserve and grand reserve championships which both went to H. S. Pipes & Sons on Babbit, a daughter af Brampton Financier, a cow of strong constitution and ideal udder shown in the two-year-old cow class. Eminent Raleigh the head of the Brampton herd and first in the aged bull class was senior and grand champion male and is the son of Mabel's Raleigh, the sire of long distance test cows. His dam was by Eminent II, a $10,000 bull. Pipes & Sons won second and third places respectively in the aged bull class on Imported Fereor and Brampton Financier. Fox Hall St. John O' Dreamwold owned by Josselyn & Young came in for fourth money, Brampton Champion in the hands of S. Creighton, got filth award.

Robert Robinson, with Fontaine of Meadowview and Bonnie's Foxy, the former champion at Fredericton last year, won second and third places respectively in competition with Bull & Sons' Tolstoi, in the two-year-old bull class. In the junior yearling bull class, Bull & Sons had the only entry. They showed Brampton Phra, the winner of the junior championship. He was grand champion at Sherbrooke, where Judge Weyman said he was the best Jersey bull he had ever seen. Bull led the way in the senior yearling bull class, followed in second, third and fourth places by J. E. Baker & Sons. Robert Robinson with Cromo's Merry Prince and H. S. Pipes & Sons. H.

S. Pipes & Sons won the red ribbon in both the calf classes.

In the aged cow class, Bull & Son again led the way with Brampton Blossom, a sister to the champion bull, a cow carrying an ideal udder with nicely placed teats and of true Jersey type. She was followed closely in second place by Gladys, a strong typical cow, shown by Josselyn & Young, and in third place by Robinson's Hood Farm Bonnie, a cow of good capacity and strong constitution, carrying an almost abnormally heavy udder. Bull's Miss Napoleon, a cow of wonderful capacity and grand champion at Sherbrooke, although showing under the ntage of being twelve months in milk, stood in fourth place.

It was from the dry four-year-old class that the senior and grand onships were taken, having been captured by Bull's Brampton Eminent Gidder, an outstanding daughter of Eminent II. out of Jenbie Gidder, at one time the holder of the Island butter record. Forfarshire's Fair Lady, a cow imported from Dreamwold Farm by Josselyn & Young, was second in the dry aged cow class, while Pipes & Son, third money.

e three-year-old cow class, n & Young held first and place, the former with Flying Dora, a cow of Dreamwold breeding, carrying a fine udder and possessing a particularly strong constitution. Bull's Stockwell Girl won third place in this class.

In the dry three-year-old cow class, R. Robinson mounted to the front with Figgis of Meadow View, which was first as a yearling at Halifax in 1908. Josselyn & Young and B. H. Bull & Sons had the second and third prize winners in this section.

The class for Canadian bred cows saw Josselyn & Young at the head of the class, with Pius Judy. Robinson's Lady of Meadow View stood in second place and Gypsy Girl, one of the Brampton cows occupied third base.

H. S. Pipes & Sons, B. H. Bull & Son, Josselyn & Young and Jas. E. Baker & Sons, won in the order named in the two-year-old cow class. Babbit, the cow shown by H. S. Pipes & Son in this class, is a daughter of Brampton Financier. She the reserve senior and reserve championships on her strong titution, her dairy conformation her ideal udder. Bull & Sons showed Brampton Fontaine Rose, first over all breeds in dairy test at the Sherbrooke exhibition. Josselyn & Young's cow is a daughter of their aged bull Hood Farm Pogus 40th.

Bull & Son led the way in the two-year-old heifer class with Brampton Ferrier Maid, a daughter of Brampton Ferrier, and was followed in second and third places by Josselyn & Young with two strong heifers.

In the senior yearling heifer class, Bull & Son's Brampton Mermaid, a daughter of their first prize aged cow, won the red ribbon and was given the diploma for junior female champion. Although she is only twenty-two months old she is milking and gives indications of being an out and out dairy cow. The verdict of the Jersey men was that she was the sweetest heifer on the grounds. A choice heifer by Blue Blood, shown by H. S. Pipes & Sons, won second place in this class closely followed by R. Robinson with Roxana's Image. Wm. Mullin, St. John, had the fourth prize winner.

Josselyn & Young carried off the palm in the junior heifer class with Molly of Rose Bank.

In senior calves, the Brampton herd led the way with Brampton Lil, a daughter of the champion bull. Brampton Lil also carried off the junior championship. H. S. Pipes & Son carried off the blue and white ribbons on daughters of Brampton Financier. Bull & Son again led the way in the junior calf class with a milky type heifer, followed in second place by H. S. Pipes & Son, with a popular Blue Blood. Bull, Josselyn & Young and Pipes, won in their respective order on aged herds. In young herds Bull led the way with a uniform herd, headed by their junior champion bull, closely followed by H. S. Pipes & Son in second and third places.

Brampton Financier, H. S. Pipes & Son's aged bull, had the honor of gaining the most coveted prize for bull and three of his get.

Josselyn & Young's Judy and R. Robinson's Hood Farm Bonnie, captured first and second places respectively, for cow and two of her progeny. For full list of awards see prize list on another page.

HOLSTEINS.—Samuel Dickie & Sons, Truro, N. S.; Logan Bros., Amherst Point, N. S.; Harding Bros. Welsford, N. B., and Lea & Clark, Victoria, P. E. I., were in battle array at St. John, with the very best of their black and whites. We would have liked to see some competition from Western breeders for our boys think they can beat them in the show ring, in fact Logan Bros. have already met the Western breeders and have come away victorious.

W. W. Ballentyne, Stratford, Ont., placed the awards in this class.

Sir Rooker Posch Artis, Samuel Dickie & Sons' aged bull, led his class and carried off the senior championship and reserve grand championship, closely followed in second place in the former class by Logan's Mercena Vale.

In the two-year-old bull class, Logan led the way with Laddie, the winner of the reserve senior male championship, Harding Bros., were second in this class with Piet's Jacoba's Gay Lad, while Samuel Dickie & Sons, were third with Helbon DeKol's Prince. Lea & Clark's bull Victor of Fair Mede stood in fourth place.

Lea & Clark led the senior yearling bull class and had the only junior yearling bull on the grounds. They were successful in capturing the junior championship and grand championship diplomas with Bob Dorinda, a typical Holstein youngster of great promise. He will stand future watching.

The junior reserve championship diploma was captured by Logan Bros.' Dick. Logan Bros. also captured first and third awards on senior bull calves and second on junior bull calf. The other awards in the bull calf classes went to Lea & Clark.

In the female classes, Logan Bros. won first and senior and grand championships on cow, four-years-old, or over, with an imported cow, Piet 6th, and in the section for dry cows, four-years-old, they carried off the blue ribbon with Princess Lida Posch. Their Artes Juba Oatka was first in the three-year-old cow class. In the dry three-year-old class Logan Bros. won first prize on Lady Mary Rooker and in the class for Canadian bred cows their Minnie Rooker's Poem, a Toronto, Sherbrooke and Maritime Fairs champion carried off the coveted prize and senior reserve and grand reserve championships. Logan Bros. also won second and third prizes in classes for yearling heifers and junior heifer calves, as well as first, third and fourth awards on senior heifer calves. Their aged herd led the way and they also captured the first and third breeders' young herd prizes as well as second prize on bull and three of his get.

Blanche Lahonda captured the third prize in the aged cow class for her owners, Samuel Dickie & Sons. In the two-year-old cow class, Samuel Dickie & Sons' Countess Lahonda a strong milky youngster, carried off the red ribbon, and her mates, Iosco Posch and Artis Rosie carried off first and second prizes respectively, in the two-year-old heifer class. Dickie & Sons also captured first money on junior yearling heifer with Cobiquid Orne Belle, second money on aged herd, first on bull and three of his get with their aged bull and three first prize heifers.

Harding Bros. captured the second prize on senior yearling bull with Sir Mercena Faforit Lad, Logan Bros. carrying off third money on Van Voran Vale. The third prize on Canadian bred cow went to Harding Bros. on Faforit 7th's Beauty. Third place in the three-year-old cow class went to Harding's Minnie's Queen. Harding also had the fourth prize senior yearling heifer and junior heifer calf; 4th on breeders' young herd, and third on bull and three of his get.

Lea & Clark are practically strangers in mainland show rings, but they have quite an enviable record in Island show circles. Besides their winnings in the bull classes they captured many choice morsels in the female classes. Their Jacoba Johanna, was second in the aged cow class. They led the way in the dry cow class with Jacoba Emily. Their Johanna Mercides Posch won second place in the dry three-year-old class, and their Mary Rooker II. was second in the Canadian bred class as was their Wilhelmina Van Voran in the two-year-old cow class. They led the junior yearling heifer class with Aaggie Van Voran DeKol; second in the senior heifer class. They had in the junior heifer class. They had the third prize aged herd, second prize young herd and first cow with two of her progeny as well as junior champion female. Samuel Dickie's Cobequid Orne Belle was junior reserve grand champion.

The demand for Holsteins has become so heavy that it is almost impossible to buy females from any of these breeders. A full carload was purchased, at the fair at big prices, by Herbert Logan, who left with them for New Westminster, B. C., immediately after the Dominion fair.

...DAIRY GRADES.—There were some exce,lent grade dairy cattle shown. McIntyre Bros., had a strong string of Ayrshire grades and one Holstein grade that was good enough to carry off the Holstein Breeders' Association Cup, for the the best dairy grade cow, any age. Lea & Clark showed some splendid Holstein grades and Wm. Robertson, Amherst, showed a nice senior yearling grade Ayrshire heifer.

For the winnings in this useful class see the list of awards on another page.

IN THE SHEEP PENS.

The sheep exhibit was by no means up to that of other years in point of numbers. There was very little competition and it was a case of a walk over for the breeders in their respective classes.

C. M. McRae, Ottawa, placed the awards.

We would like to have seen a larger representation of the "golden hoof." We have seen better in other years. Owing to the fact that the Dominion clashed dates with Toronto and Ottawa fairs and the small inducement in the way of prizes, breeders from the sister provinces of Quebec and Ontario did not see their way clear to come to St. John with their flocks. There should have been more money offered in these important classes and there should have been less difference between the amount of awards in first, second, and third places. The drop from first to second and from second to third was too abrupt.

Then many of our local breeders whose sheep are recorded in the American records did not thing it worth while, for the small amount offered in prizes, to change over to the National Live Stock Records and consequently they were debared from showing. The American records have just a high a standing as the National and consequently so far as exhibitions are concerned they should be and are recognized. St. John, however, to the contrary. It would be well for our breeders to record their flock and herds as soon as possible in the National Live Stock Records of Canada.

COTSWOLDS.—H. W. Corning had a magnificient flock of Cotswolds in the pink of condition and easily won every first prize in the class over a flock shown by Donald Innis, with the exception of the red ribbon for shearling ram which went to the latter flock.

OXFORD DOWNS.—James E. Baker & Sons, Barronsfield, N. S., and Chas. Symes, Minudie, N. S., had their flocks and real good ones they were, up in their class. Most of the first and second prizes went to the Baker flock.

SHROPSHIRES.—There was no competition in the Shropshire class. All the prizes were captured by Cephas Munn, Winslow Road, P. E. I.

SOUTHDOWNS were shown by Jas. E. Baker & Sons and Cephas Nunn. The Nunn flock captured all the red ribbons with the exception of the first on shearling ewe which went to the Baker flock. The Southdowns throughout their respective sections were a nice, well finished, uniform lot.

HAMPSHIRES.—Cephas Nunn and his son, Oliver Nunn, had everything their own way with two flocks of Hampshires.

CHEVIOTS.—Chas. Symes and George Symes, Minudie, N. S., had everything their own way in this trappy class. J. E. McAuley, Lower Millstream, N. B., showed two very nice rams in the aged class on which he captured second and third prizes.

DORSETS were shown by Emerson F. Savant, Overton, N. S., a promising young breeder, who is out this year for the first time. We welcome him to the field. He won in every case except in the ram lamb section over his only competitor Cephas Nunn, who has added a flock of Dorsets to his other good flocks of Hampshires, Southdowns and Shropshires.

FAT SHEEP.—J. E. Baker & Sons had everything their own way in the fat sheep class, excepting second place for wether lamb, which went to H. W. Corning.

SWINE

ged by C. M. McRae, Ottawa. It was an easy task as there was no competition. James E. Baker & Sons had their Duroec Jerseys out in good form and Charles Symes, Minudie, N. S., was there with his Poland Chinas. These were the only two breeds represented, despite the fact that pork has been soaring away up during the last year. When one of Baker's Duroec Jerseys saw the small number of swine exhibited she did her best to add to the numbers and make a better exhibit by giving birth to eleven sturdy porkers, next day after her arrival.

POULTRY-

One of the real features of the Dominion exhibition was the poultry exhibit in the new poultry house. The poultry show was the largest ever held in Eastern Canada, both in number of entries and varieties of breeds. Almost every variety in the Standard was represented.

The American varieties surpassed all others, both in numbers and in quality, followed by the Mediterranean varieties. It is an established fact that these two breeds of poultry represented by their numerous varieties are a long way in the lead

(Continued on page 751.)

The Modern Power

Apropos the recent developments in Moncton oil fields. it may not be amiss to state a few facts concerning petroleum and what this industry means to New Brunswick.

When it is stated that the annual yield of petroleum in the United States exceeds eight billion gallons and that this is but a fraction of the world's yield, one may gain some impression of the magnitude of this great industry, of this colossal source of revenue, and its place in modern commerce.

The oil found at Moncton is of a fine quality, testing at 40 Beaume, and the development of this industry, which is sure to follow, argues well for the future of this Province. Districts where oil has been struck in the past have invariably blossomed forth in wealth. There are districts in the southwest where Indians are millionaires; fortunes acquired in royalties paid on oil wells struck on their reservations. It is a resource quickly and cheaply developed, and, once sunk, these wells spout forth wealth day after day from apparently inexhaustible reservoirs in the bowels of the earth.

Of all the servants of mankind, none are of greater utility than this great petroleum family, and particularly the principal member, gasoline; every motor car, every motor boat, every airship, every gasoline torch—from the plumber's to the wonderful little device used in the dentist's laboratory, and some of the most modern systems of illuminating, all stand monuments to gasoline, not to mention the other members of this great family, such as kerosene, paraffin, vaseline, lubricating oils and hundreds of other products in daily use.

The story of oil would make a lengthy romance. Space will not permit of here giving in detail the interesting process by which these products are obtained, nor the manifold uses to which they are put. The various products are distilled from the crude petroleum by means of heating it and drawing them off at different temperatures. It is in respect to gasoline that some of the more useful phases of petroleum lie. In the United States there are distilled annually over 200 million gallons of gasoline, half of which is used by automobiles. In the light of modern appliances, and owing to the fact that its growing use is causing the public to become on more and more familiar terms with gasoline, the old prejudices against this fuel are fast disappearing, and the usefulness of the product is becoming better known. This liquid possesses many advantages over solid fuel; (1) Cheapness and efficiency; (2) compactness; (3) lack of carbonizing; (4) lack of waste. As to the first, one gallon will develop 8 h. p. an hour, or as an illuminant will develop 2000 candlepower for fourteen hours when burned in mantles. (2) Compactness is the feature that makes gasoline the essential factor in the development of so many of our modern appliances, which would be impossible without it. (3) In the engine it is practically non-carbonizing, and in the new lighting systems it gives no smoke, being entirely consumed at the burner. (4) This feature is one of the chief advantages of gasoline, their being neither ash or residue and a consequential economy.

Those who handle gasoline and are familiar with it do not fear it. The man who rides daily with several gallons under his seat would smile at the old idea that it was the equivalent to as much dynamite. The old expression, "gasoline explosion," is a misnomer, and few people have ever witnessed such a thing. Gasoline will burn when in the air, but to explode it three things are necessary: (1) Mixture with 11 parts air; (2) compression; (3) ignition under these conditions. So an explosion as with gunpowder is impossible, as gasoline cannot explode when air is excluded; it requires vapor, air and compression with ignition, while gun powder gives its effect only when confined away from the air.—The Busy East.

Andrew Elliott's Report as Delegate to N. B. Summer Meetings.

To Hon. D. V. Landry, Commissioner for Agriculture:

In presenting to you my report of work done June 13 to July 23, 1910, allow me to acknowledge the completeness of preliminary work. I found that the meetings had been well advertised and arrangements for meetings placed in careful hands. I am pleased also to note that quite a number of members of the legislature attended meetings and gave addresses, among whom were Premier Hazen, Dr. Landry, Commissioner for Agriculture, Mr. Dixon, of Hillsboro; Mr. Woods, of Welsford, and a number of others whose names or addresses I did not catch. One thing particularly pleasing to me was the fact that not once was there the remotest hint as to the political alignment of the persons who spoke. all alike expressing their appreciation of the importance of a better agriculture throughout the province.

To me these meetings have been particularly encouraging. They were well attended by an enquiring people and I am hopeful that the foundation is being firmly laid for a general uplift of the agriculture of the province. Perhaps by no means can this be done so effectively as by bringing before the people—all the people—at all times, the tremendous importance of the soil as the only foundation of Provincial and Canadian greatness. Compared with the soil every other avenue of wealth sinks into insignificance.

From my observation, I think that the best time to hold these meetings is during the summer between seed time and haying.

If I may be allowed to suggest, I think it would be a move in the right direction to have a woman delegate along to give separate talks to the women during the afternoon and address the women during the afternoon and address joint meetings in the evening.

I have to acknowledge the valuable assistance I received from Mr. John Woods, of Welsford, who was with me for six days, also from Rev. J. B. Daggett, with whom I went to Deer, Campbello and Grand Manan Islands.

At most of the places visited meetings were held. 37 meetings were held at 29 different points. 99 different addresses were given and there was a total attendance of 3857 people, an average attendance at each place of 133 and at each meeting of 82 persons. Everywhere I met carefully attentive people.

Again thanking you for your arrangements, which did so much to make my work a pleasure, I remain,

Yours respectfully,
ANDREW ELLIOTT.

Home Butchering.

By dividing the time of killing into several periods, fresh meat can be provided from October until March or April. Early winter, that is, in December or January, is probably the best time for butchering the animals that are to provide the year's meat supply, as the meat then has plenty of time for curing before warm weather.

When hogs are to be killed have everything in readiness the evening before. The knives can be sharpened the fuel and kettles for heating the water in place and everything needed for scraping and hanging the carcasses at hand. Most farmers like to start operations on butchering day early in the morning, so as to get as near done in one day as possible.

Killing the hogs by shooting is about the best method. All excitement incident to some methods of killing is avoided when a rifle is used, and this insures a free discharge of blood. In sticking the hog a keen-edged, medium-sized knife should be used, running the knife straight in directly in front of the breast bone, so as to sever one of the jugular veins. Care should be taken to not penetrate the shoulder, as this will leave a blood clot there and largely destroy its value.

After sticking the pig wait until life is entirely extinct before beginning to scald. The water should be at the proper temperature, neither too hot nor too cold, or the bristles will not come off properly. A too hot scald sets the hair and makes the skin tender. By bringing the water to the boiling point and then removing to a cold barrel the temperature will be about right. A shovelful of wood ashes put into the water will help to loosen the scurf on the body of the hog. Test the scald often by pulling the hair.

After the hair is removed from the hog, the carcass should then be washed by dashing on hot water, then scraping to remove all scurf, finally rinsing with cold water. Then hang the hog upon the gallows by placing the ends of the gambrel through the ham strings. The entrails can then be removed. Let the meat cáill thoroughly then take them down and cut up. When cutting lay the hog on its back and cut the head off just back of the ears and jowl. Then divide the body of the hog from front to rear, along the backbone. Remove the leaf lard, ribs and backbone, and then cut out the hams and shoulders, cutting off the feet and then the hocks. Trim the hams and shoulders close and smooth.

Cut the head in two and remove the brains and eyes. Cut off the ears and end of the nose. Place the head and all bloody pieces of trimmings in a vessel of water to soak out the blood. The head and feet may then be scraped and cleaned, to be used later for head cheese or pickled.

In rendering the lard put the leaf fat in the kettles first and stir until it renders out some grease, then add the fat and complete the rendering. Don't have any water about the lard while rendering. When the meat is cold it may then be salted down.

The small intestines may be used for stuffing the sausage. If it is desired to keep any of the sausage until warm weather fry until a nice brown color, then place in jars, cover with its own fat, or melted lard if there is not enough of the sausage fat, and seal.—Successful Farming.

Salt for Mangolds

That applications of salt in addition to other fertilizers is useful for the mangold crop is generally acknowledged, but what is the most suitable quantity to apply is a question upon which there is considerable difference of opinion.

To obtain definite information on this point, the Harper-Adams Agricultural College have been conducting experiments for three years with quantities per acre of 2½ cwt., 5 cwt. 10 cwt., and 15 cwt. respectively.

The salt was applied in the middle of April and thoroughly worked into the soil by cultivating, harrowing, and rolling three times before rowing up, the ridges being again split before sowing.

Special care has to be taken to ensure the salt being completely mixed with the soil, otherwise the seed is liable to be damaged.

The dressings were made across all the manurial and variety trial plots, and the weights are the average of the different plots. The result was the following:—The application of

2½ cwt. produced an average increase, about 4 tons roots.

5 cwt. produced an average increase, about 5½ tons roots.

10 cwt, produced an average increase, about 8½ tons roots.

15 cwt. produced an average increase, about 4 tons roots.

The big application of 15 cwt. was tried for the first time last year, just to see what the effect would be.

The experiment seems to demonstrate that the quantity of salt that can be used with the best result is 10 cwt. per acre for the mangold

Suckers on Corn.

In the past suckers on corn were regarded as very unhesirable and oftentimes the small boy had to go through the cornfield and pull them off. Recent experiments show that suckering of the corn plant is merely a response to its surroundings. When the stand is thin, as it is this year, there will always be plenty of suckers. The corn plants simply try to remedy the thin stand by suckering.

In an experiment several years ago where there were four plants in a hill eight suckers developed to each one hundred plants; where there were three in a hill, twenty-five suckers developed; where there were two in a hill, seventy-six suckers and where there was only one plant in the hill, 198 suckers developed to each one hundred plants. It was noticed that a large number of the suckers produced ears.

Another cause for suckering is the richness of the land. Rich, new land has been found to produce nearly twice the number of suckers as old, worn-out land. To some extent the tendency to suckers is no doubt inherited, but the main causes of suckering are the thinness of the stand, the richness of the ground, and the weather conditions.

Experiments conducted for two years indicated that it paid to leave the suckers on. The average yield for two years of corn with the suckers left on was eighty-one bushels, while for corn with suckers pulled off was sixty-four bushels. Many of the suckers must have produced good ears.—Wallaces' Farmer.

Nitrogen Germs.

The United States Department of Agriculture have issued a special circular to the effect that the extravagant and misleading claims contained in some of the advertising matter now appearing in regard to inoculating material for legumes make it necessary to again call attention to the limitations of the value of inoculation. Summarised from Department bulletins, they may be stated as follows:—

"No beneficial results can be expected for a particular crop if the bacteria for that crop are already present in the soil.

"But little, if any, benefit can be expected from the use of these bacteria if the ground is decidedly in need of other fertilizers, such as phosphates, potash or lime.

"But little, if any, benefit can be expected from inoculation if the soil is already rich in nitrogen.

"A recent examination of samples of cultures for inoculating legumes obtained through various seed firms throughout the United States indicates that there has been a slight improvement in the general character of these cultures."

HORTICULTURE

New Destructive Insect and Pest Act for the Dominion.

The lollowing is the text of the new Destructive Insects and Pests Act and the regulations issued in connection with the same. By the passing of this Act the San Jose Scale Act is repealed. It will be seen that the new Act and regulations are of a wider character and of a far greater protective value to the fruit grower and nurseryman. The fumigation regulations instituted under the Act have been incorporated in the new regulations with certain alterations. Under the new fumigation regulations conifers will be fumigated. It is hoped that this will assist in preventing the introduction into nurseries of several species of woolly plant lice which infest nursery stock and which are carried in the same.

In addition to the fumigation regulations, provision is made now for:

1. The inspection at the points of destination of European nursery stock (which is still exempt from fumigation) and such other stock as it may be deemed necessary to inspect.

2. The destruction of infested stock and packages, etc., containing the same and compensation for such matter as may be destroyed.

3. The inspection of orchards and nurseries and the treatment of infested vegetation.

4. The prohibition of the disposal in anyway of vegetation infested with insects scheduled under the Act.

5. The notification of the presence of any of the insects, pests or diseases.

In view of the increasing amount of nursery stock imported through the port of Niagara Falls, the importation season for that port has been extended and stock may now be imported between October 1st and May 1st.

The attention of importers of nursery stock is called particularly to the regulation under which notification must be given of the importation of nursery stock. All nursery stock, including European and such stock as is extempt from fumigation may be imported only during the periods specified under Regulation 3.

PROVISIONS OF THE ACT.

An Act to prevent the introduction or spreading of insects, pests and diseases destructive to vegetation.

(Note.—In what follows certain formal and unimportant clauses have been omitted. The number of each clause or regulation is the same as in the Act.—Editor.)

1. This Act may be cited as The Destructive Insects and Pests' Act.

3. The Governor in Council may make such regulations as are deemed expedient to prevent the introduction or admission into Canada, or the spreading therein, of any insect, pest or disease destructive to vegetation.

4. Such regulations may provide—

(a) for the prohibition generally, or from any particular country or place, of the introduction or admission into Canada of any vegetable or other matter likely to introduce any such insect, pests or disease.

(b) the terms or conditions upon, and the places at which any such vegetable or other matter may be introduced or admitted into Canada.

(c) for treatment and manner of treatment to be given to any vegetation, vegetable matter or premises in order to prevent the spreading of any such insect, pest or disease, and may prescribe whether such treatment shall be given by the owner or by a person appointed for that purpose.

(d) for the destruction of any crop tree, bush or other vegetable matter or vegetation, or containers thereof infested with or suspected to be infested with any such insect, pest or disease.

(e) for the granting of compensation for any such crop, tree, bush or other vegetation or containers thereof so destroyed, such compensation not to exceed two-thirds of the value of the matter destroyed and to be granted only by the Governor in Council upon the recommendation of the Minister.

(f) for the prohibition of the sale of any vegetable matter infected with any such insect, pest or disease.

(g) that the occupier of the premises on which is discovered any such insect, pest or disease shall forthwith notify the Minister of Agriculture and shall also send specimens of such insect, pests or disease.

*h) for the confiscation of any vegetable matter and the container thereof, if any, in respect of which a breach of this Act or any regulation made thereunder, is committed, and generally for any other purpose which may be deemed expedient for carrying out this Act, whether such other regulations are of the kind enumerated in this section or not.

5. The Minister may appoint inspectors or other officers for carrying out this Act and the regulations made thereunder.

6. Any inspector or other officer so appointed may enter any place or premises in which he has reason to believe there exists any such insect, pests or disease, and may take specimens thereof and also of any vegetable matter infested or suspected of being infested therewith.

7. The Minister, upon the report of any inspector setting forth a reasonable belief of the existence of any such insect, pest or disease in any area defined in such report, may prohibit the removal from such area or the movement therein of any vegetation, vegetable or other matter which, in his opinion is likely to result in the spread of such insect, pest or disease.

8. Every person who contravenes any provision of this Act or any regulation made thereunder, shall be liable, upon summary conviction, to a fine not exceeding $100 or to imprisonment for a term not exceeding six months, or to both fine and imprisonment. Any vegetable or other matter imported or brought into Canada contrary to this Act, or to any regulation made thereunder, shall be forfeited to the Crown.

9. The San Jose Scale Act is repealed.

REGULATIONS UNDER THE FOREGOING ACT.

1. "Inspector" means a person appointed for carrying out the provisions of the Destructive Insects and Pests' Act and the regulations made thereunder.

2. No tree, plant or other vegetation or vegetable matter infested with any of the insects, pests or diseases to which this Act applies, shall be imported into Canada except as hereinafter provided.

3. Nursery stock, including trees shrubs, plants, vines, grafts, scions, currings or buds entering Canada shall be imported only through the ports and during the periods respectively hereinafter mentioned, that is to say:

Vancouver, B. C., and Niagara Falls, Ont.—From October 1st to May 1st.

Winnipeg, Man., and St. John, N. B.—From March 15th to May 15th, and from September 26th to December 7th.

At these points of entry the importations shall be fumigated in the fumigation houses provided for that purpose, and a certificate of fumigation will be issued, without which no stock may be taken out of bond. Importations by mail shall be subject to the same regulations.

Provided, however, that the following vegetation shall be extempt from fumigation:

(a) Greenhouse plants with the exception of roses and other woody plants.

(b) Herbaceous perennials (the stems of which die down in winter) such as perennial phlox, peonies, sunflowers, etc.

(c) Herbaceous bedding plants such as geraniums, verbenas, pansies, etc.

(d) Bulbs and tubers (such as hyacinths, lilies, narcissi and other true bulbs, and also the tubers of dahlias, irises, etc.)

(e) Nursery stock orginating in Europe.

Cottonwood or Necklace Poplar (Populus deltoides) when shipped from and grown in Dakota or Minnesota, two of the United States of America, may be admitted at the customs ports of Brandon or Winnepeg, Man., and without fumigation.

4. The port by which it is intended that the nursery stock shall enter shall be clearly stated on each package, and all shipments made in accordance with these regulations will be entirely at the risk of the shippers or consignees, the Government assuming no responsibility whatever.

5. All persons importing nursery stock into Canada shall give notice to the Minister within five days of despatching the order for the same, and they shall again notify the Minister on the arrival of the shipment in Canada.

6. European nursery stock, and such other imported vegetation or vegetable matter as the Minister may determine, entering Canada may be allowed to proceed and shall be inspected at the point of destination but must not be unpacked except in the presence of an Inspector.

7. If, on inspection, nursery stock or other vegetation or vegetable matter is found to be infected with any of the insects, pests or diseases hereinafter specified, it shall be destroyed to the extent deemed necessary by the inspector and in his presence. All cases, packages and packing in which such stock has been contained shall also be destroyed in the same manner.

8. Any inspector entering lands nursery or other premises where there is reason to believe that any of the insects, pests or diseases hereinafter specified are or may be present, shall give instructions for the treatment or destruction of any tree, bush, crop or other vegetation or vegetable matter or the containers thereof, which may be found or suspected to be infested with any of insects, pests or diseases hereinafter specified, and such instructions shall be carried out by the owner or the lessee of the infected or suspected vegetation, vegetable matter or containers thereof, and such remedial treatment shall be carried out and continued until the insect, pest or disease shall be deemed by the inspector to have been exterminated.

9. Compensation not exceeding two-thirds of the value as assessed by the inspector, of the vegetation or vegetable matter or container thereof, destroyed by the instructions of an inspector, shall be granted by the Governor in Council upon the recommendation of the Minister.

10. It shall be illegal to sell, offer for sale or in any way dispose of or receive any trees, shrubs or other plants, vegetable matter or portions of the same, if the same are infested with any of the insects, pests or diseases hereinafyer specified.

11. The owner, occupier or lessee of any premises or place where any of the insects, pests or diseases specified herein shall be found, shall immediately notify the Minister and

HAD TRIED MANY REMEDIES FOR

CONSTIPATION

FOUND NONE TO EQUAL

Milburn's Laxa-Liver Pills

Constipation is one of the most prevalent troubles the human race is subject to, and is the greatest cause of many of our ailments. Keep the Bowels open and you will very seldom be sick.

Mrs. M. Bell, 467 Harris St., Vancouver, B.C., writes:—"I had tried many remedies for Constipation and never found any so satisfactory as your Milburn's Laxa-Liver Pills.

We always keep them in the house and would not be without them.

"I recommended them to a neighbor and she is highly enthusiastic about them, as her's is a very difficult case, and she expected no good results from them. You may imagine her surprise and gratification when she found that they completely cured her."

Milburn's Laxa-Liver Pills are 25c per vial, or 5 vials for $1.00, at all dealers, or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

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shall also send him specimens of such insects, pests or diseases.

12. The destructive insects, pests and diseases to which the said Act shall apply include the following:

The San Jose Scale (Aspidiotus perniciosus.

The Brown-tail Moth (Euproctis chrysorrhoea.)

The Woolly Aphis (Schozoneura lanigera.)

The West Indian Peach Scale (Aulacaspis pentagona.)

The Gypsy Moth (Porthetria dispar.)

Potato Canker (Chrysophlyctis endobiotica.)

Parasitic diseases affecting potatoes externally or internally.

Branch or Stem Canker (Nectria ditissimi.)

Gooseberry Mildew (Sphaerotheca nors-uvae.)

White Pine Blister Rust (Peridermum Strobi).

13. The importation of potatoes into Canada from Newfoundland or the islands of St. Pierre or Miquelon, is prohibited.

14. The Minister may, upon special request to that effect, authorize the importation into Canada of any insect, pest or disease herein specified, but for scientific purposes only.

15. The regulations made under the San Jose Scale Act are repealed. —C. Gordon Hewett.

The Little Garden Spot

Jake H. Harrison.

The poultryman may pipe his lay,
The butcher boast his meat,
The man who keeps the grocery
May sell us things to eat;
But after all, the garden spot,
That little "patch" of ground,
If tended in the proper way,
Brings most, a living sound.

It is the best of all the farm,
That worthy "patch" of land,
Where beans and peas and cabbages
Stand forth in phalanx grand;
Where "new potatoes" always grow,
And flourish in the spring.
And large tomatoes redly blush,
As fine as anything.

There radishes and lettuce grow,
And onions may be seen,
And cucumbers and squashes, too,
And pie plant rich and green;
And red strawberries in their beds,
And other kinds of things,
Which to the farmer's appetite
A healthy relish brings.

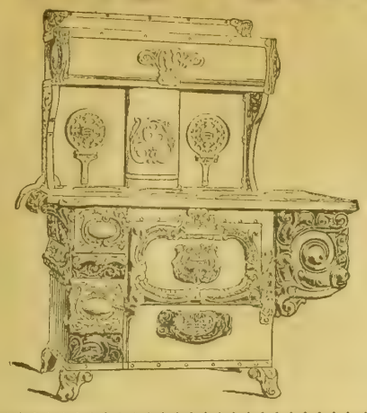
The poultryman may sing of eggs,
And how the chickens pay,
They are no doubt a source of gain,
And handy in their way;
But still the little garden spot
Is surely hard to beat,
And leaves the chickens far behind,
Producing things to eat.

Then give the garden spot a chance,
If you are on the farm,
Remembering, at ilde times,
The hoe will do no harm;
Your poultry may be well enough,
But I have this to say,
The garden, from a living point,
Will beat it any day.

In ordering fruit trees this fall do not get every variety that has recently been introduced. Get standard varieties that have stood the tests of time and that are propagated and recommended by reliable nurserymen.

When you place your order for fruit trees, include a few good shade trees and permit your wife and daughters to select some shrubs and flowers. Money cannot buy articles that give more pleasure and comfort than fruits, shrubs, shade and flowers.

THE CAPITAL FAVORITE



is a high class Family Steel Range adapted for either coal or wood. It is honorably built of the best material, and put together as tight as a steam boiler.

It has a roomy fire box for wood and the linings can be changed from wood to coal or vice versa without the disturbing of a bolt.

This Range is made of Heavy British Cold Rolled Non-Corrosive Polished Steel. It never needs black-leading, only an occasional light rub with a cloth will keep it clean and bright.

Lots of room on the top and in the oven to do the busy morning's work.

There are thousands of these Ranges in the homes of the best farmers in the country, giving absolute satisfaction.

Ask your dealer for **THE CAPITAL FAVORITE** and take no other.

MANUFACTURED BY

FINDLAY BROS. CO., Limited, - Carleton Place, Ontario.

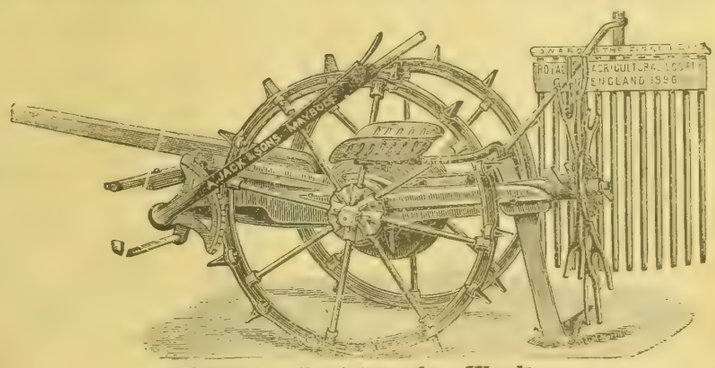
THE WORLD'S BEST POTATO DIGGER

Jack's Royal First Prize

New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position for Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

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——As Agents for the——

Empire Cream Separators

1st.—Because no selling experience is necessary.

2nd.—Because one farmer understands the other.

3rd.—Because the Empire Cream Separator is the easiest to clean, easiest to turn and easiest to sell.

4th.—Because selling separators can be done at odd times without neglecting farm work.

5th.—Because the makers of Empire Cream Separators stand behind every machine.

6th.—Because there is no fault-finding after machine has been placed.

Write us to-day for further particulars.

The Empire Cream Separator Company of Canada,

Sussex, - - N. B.

DAIRYING.

C. W. McDougall, Dairy Inspector, staff Contributor.

Making Exhibition Butter.

Every fall I get letters from people asking me to give them suggestions regarding the making of exhibition butter. I thought the hints I give to the few might perhaps be appreciated by the many whose ambition leads them to try for the butter prizes, and perchance add to their fame as butter makers, also a few dollars to their spending money. It is a worthy ambition to help on the fairs in this way and if entered into with the right spirit leads to a wholesome rivalry which is good for a community.

With the greater refinement manifest in all phases of living has come a more fastidious taste in regard to butter. Of this change no one is in closer touch than the expert judges who visit the fairs. They know what the best buyers in the market are demanding and make the awards to the packages coming nearest to the requirements.

Year by year the desire for a highly flavored butter has lessened and now that butter which scores highest has a very mild creamy flavor—one would almost say a lack of flavor were it not so pleasing and clean-tasting to the palate.

This flavor is brought about by having the cream with a low percentage of acid in it. In other words with a very mild sour taste. Apart from the acid in the cream the flavor may be due to the kind of bacteria, some forms producing a more pronounced odor and flavor than others. If a butter-maker has doubts about the culture she is using, or the flavor brought about by the natural souring of the cream, it would be well to procure a culture from the O. A. C. or from a creamery where the butter is of No. 1 quality. Always give a new culture a trial test before using it for exhibition butter.

HOW TO PASTEURIZE.

If there is the least suspicion of any objectionable flavor being in the cream due to feed, unclean milking, etc., it is wisdom to pasteurize the cream. The method has been often told but it may be best to repeat it. Heat the cream to 160 degrees by setting the can in a vessel of hot water and hold at that temperature for 30 minutes. A higher temperature is now recommended but is apt to give a cooked or boiled milk flavor to the butter, so for exhibition work I would be on the safe side and not go over the 160 degrees. The cream should be stirred while heating and after standing the half hour should be quickly cooled to 60 degrees or lower. Such cream needs to have from 5 per cent. to 10 per cent. good culture added to it, and should be ready for churning the next day.

Hand in hand with the mild flavor has come the desire for lighter colored butter. A clear straw color meets the taste of the fastidious. I have known butter to be scored severely when the cow alone had been responsible for the high color. However, with the careful judge it is the evenness and clearness or brightness rather than the depth or shade of color that counts.

To obtain that firm, waxy texture so desirable, I believe it necessary to hold the cream for some hours at a temperature some degrees below churning. Then just before putting the cream in the churn bring it to the required temperature, having it on the cool side rather than have the butter come too quickly and be soft.

There is no use to state temperatures for conditions have to be always considered. With good cream, and the churn not half full, I like the butter to come in from 20 to 30 minutes. I find from experience with cream that the temperature which will bring the butter in that time is right.

Just before drawing the buttermilk add some cold water and revolve the churn a few times, rapidly. This frees the buttermilk from the butter, and it will drain away much more readily. Rinse down the butter with a little of the wash water, then wash but once. Much washing robs the butter of its aroma and gives it an insipid flavor.

SALT LIGHTLY.

Light salting is also another requirement of the high-class market. It is not desirable to hide the sweet, creamy flavor with salt, neither is it necessary to use excessive salt to keep the butter for it is supposed now to soon reach the consumer.

With small churnings, I prefer when making exhibition butter, weighing the butter and salting it at the rate of ¾ oz. a lb. This is for prints for the home market.

Sift on the salt and give the butter a slight working. Allow it to stand two or three hours, but do not let it become hard. At the end of this time give it another working, using pressure only, as a sliding, rubbing motion produces a greasy texture. Only work sufficiently to expel excessive moisture and to insure an even distribution of the salt.

Use the best of parchment paper and have the package entirely free from holes and neatly wrapped. Avoid all fussiness.

See that the butter is thoroughly chilled before taking it to the fair, otherwise it is impossible for the judge to pull out with his trier a nice smooth plug of butter from the print. Many a good butter maker does not get the high score she should because her butter has not firmed before coming to the fair.

It is always best to make the butter early the day before it is to be taken to the fair. I consider it gets a better texture and flavor by being at least a day old before being submitted to the trier of a judge.—Laura Rose, in Farm and Dairy.

Magnet Cream Separator "Sanitary Strainer"

For STRAINING MILK. Patent No. 123484.

PRICE $1.00 COMPLETE.

Fits the MAGNET Tank or any pail of same size.

All milk strainers have failed to meet the requirements of Dairy Authorities except the cloth strainer, which can be washed clean.

The difficulty of holding the cloth on the top of the pail or tank has prevented the general adoption of the cloth strainer on the cream separator.

By a simple spring device (MAGNET PATENT), which circles the top of the tank and holds the cloth in position, this difficulty is overcome and the milk strained directly into the tank.

The advantages are :—

1st. Great convenience in straining the milk.

2nd It retains the animal heat thus enabling more complete separation of butter fat from the milk.

3rd. Prevents dust or foreign matter from falling into the tank.

4th. Nothing to wash except the cloth.

5th. Time and labor saved. Adjust the spring over the cloth, holding it tight around the top of the tank, that is all.

6th. The only "Sanitary" Strainer known.

7th. It is simple, clean and will not wear out.

8th The same MAGNET quality to the strainer as in the Cream Separator.

9th. Every MAGNET Tank should have one fitted on.

Fill in the coupon with name and address, enclose **one dollar** and strainer will be sent you prepaid Money refunded if you do not find it the handiest article in your dairy.

Please send a MAGNET "SANITARY STRAINER," charges paid,

Enclosed please find $1.00 stamps of postal order. To ..... P. O ..... Province .....

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Breeding Dairy Cows.

There are three essentials that we must bear in mind when we seek to breed dairy cattle of the highest class. They are: 1st, the qualities that make a desirable animal; 2nd, profitable production; 3rd, reproductive ability. I shall consider these in the order named.

The qualities that make a desirable animal, are usually expressed by the word Constitution. As used by breeders, constitution indicates strength and the ability of an animal to maintain its general health and vigor and its productive and reproductive powers unimpaired to a good old age. The score card points allotted to constitution are merely those indicative of physical health and strength.

It is far easier to get good prices for well formed, attractive cattle, and form is the only visible indication of performance. Wherever you find a man selecting, breeding and caring for his cows intelligently, you will find a herd returning a large profit. And when you find a man that is indifferent regarding these things, you will find a herd that returns at the best a very small profit. The great secret is the individual cows of the herd; in every herd there is an enormous variation in the production and profit of the different cows. There is only one way to secure the highest profit from your herd and that is to know what each cow is doing and to keep the best. The cow testing associations

ONE OF THESE "SWISS ARMY" RIFLES FOR SEVEN NEW SUBSCRIBERS

We have purchased several hundred Swiss Army Rifles, They are repeating Rifles, holding 12 cartridges, 42 calibre in the magazine and one in the chamber. The action is the reliable bolt type, and works quickly and smoothly. The barrel is rifled and is sighted for long ranges The front sight is open and the rear sight adjustable for elevation. **Guaranteed perfect.** This is the famous "Swiss Army" rifle. It is splendid for hunting deer and larger game etc. No one living in the country should be without one of these rifles Only a limited number to be obtained. If you want one you should start to-day to secure seven new subscribers, If you intend earning a rifle drop us a card to-day and one will be reserved for you as long as they last, Don't delay, start to-day.

Address—**MARITIME FARMER, Sussex, N. B.**

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That Farmers all over the World are Discarding Common Cream Separators for

SHARPLES DAIRY TUBULARS

We will mail to you, free, large pictures showing the immense number of common cream separators recently exchanged for Sharples Dairy Tubulars. These pictures would cover more than one page of this paper, and are positive proof that farmers all over the world are discarding common machines for Sharples Dairy Tubulars. These pictures show just a short time accumulation of these discarded common machines. Write for these pictures at once.

Sharples Dairy Tubular Cream Separators contain neither disks nor other contraptions, yet produce twice the skimming force, skim faster and skim twice as clean as common machines. Because Dairy Tubulars are so simple, they wash many times easier and wear several times longer than common separators. Tubular sales exceed most, if not all, others combined. Tubulars probably replace more common separators than any one maker of such machines sells. The World's Best. The manufacture of Tubulars is one of Canada's leading industries.

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THE SHARPLES SEPARATOR CO.

TORONTO, ONT. WINNIPEG, MAN.

It Speaks for Itself

No springs,

No clogs,

No brakes,

No cog wheel.

THE BEST.

because it is the strongest and most mechanical. It runs on the most satisfactory and strongest steel track made. Write for circular and price list to

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Manufacturers of Hay Tools, Barn Door Hangers, Cow Stalls and Stanchions and Hardware Specialties.

Quality Butter

If you have never used a "FAVORITE" CHURN, you can't imagine what a difference it will make in the quality of the butter.

The "FAVORITE" is known all over Canada as the Churn that brings the quality butter—and gets every drop of butter out of the cream. Hand lever and foot tread—8 sizes.

"Puritan" Washer is another old favorite. Washes a tubful of clothes in five minutes. If your dealer does not handle them, write us. 74

DAVID MAXWELL & SONS, - ST. MARYS, ONT.

under the control of this society furnish the best way of doing this work The breeders of pure bred dairy cattle in this State are missing great opportunities by not doing everything possible to organize such associations in their own neighborhoods.

If you desire to build up a permanent herd to receive enduring benefit from your work of testing and selecting you must seek for reproductive ability.

While the scrub cow may have productive ability and be a fairly desirable individual, there is little chance that she has within herself the power of producing offspring with her good qualities unless she is mated with a bull capable of transmitting those same qualities. Mated with a bull of her own class her own merits will be great indeed if she can impress them upon her offspring. Among grade cows of the established dairy breeds desirable individuals and profitable producers are the rule rather than the exception, and when mated with purely bred bulls of their respective breeds these qualities are usually reproduced. Mated with grade bulls like themselves the tendency of hybrid matings to revert will produce a mixed offspring, some good and some bad. In pure bred herds we expect to find the desirable qualities and productive ability reproduced with certainty. You may conclude from what I have said regarding the comparative reproductive abilities of scrub, grade and pure bred that the pure bred is always a desirable animal. I do lay great stress upon pure blood because it is the source from which we must draw the blood for all breed improvement. But a pure bred animal should be pure, not only in the sense of being eligible to registry, but pure bred because it is free from the blood of unproductive ancestors. In testing a pure bred herd we will usually find about as wide a variation in production as in any other herd, but in good herds it varies around a far higher average. We will also sometimes find that the daughters and granddaughters of some certain animal group themselves together and whole families will be found whose production is uniform and far above the rest of the herd.

When a breeder finds a family of this sort he should devote his energies to developing it, for he has a firm foundation upon which to build for such families are the real source of all improvement in breeding. JOHN CLARK.

Some July Contrasts.

On the milk record sheets received at the Dairy Division, Ottawa, from members of cow testing associations there are found some good yields of milk and butter fat for July; for instance, in the Bertie, Ont., association one cow that freshened in May gave 1320 pounds of milk, testing 4.0 per cent. of fat, equal to 52.8 pounds of fat. One herd of 17 cows at Glanworth, Ont., has an average of 926 pounds of milk, the herd including 5 two-year-olds. Some cows in this herd have given 4840 pounds of milk in 4 months. At Cassel, Ont., 183 cows averaged 858 pounds of milk, 3.6 test, 28.3 pounds of fat.

The records of many individual cows in these and other associations show a yield of barely 650 pounds of milk and 22 pounds of fat, or less than half of many good yields.

Dairy farmers, it is not difficult for you to make three very simple deductions from these remarkable contrasts. First: there are plenty of cows still being kept for milk production that are not worthy the name of dairy cows. Second: scores of dairy farmers are getting excellent records from selected herds. Third: records alone do not increase the yield of milk and butter, there must be intelligent selection of good cows based on the lessons that individual records teach. C. F. W.

Ottawa, August, 1910.

WINDSOR DAIRY SALT

"Expect to get the prize for the best butter, this year?"

"Of course I do.

I have the best cows in the country—and here's my Windsor Butter Salt.

You can't beat that combination.

You know, I have won first prize for the best butter ever since I began to use Windsor Butter Salt"

"Hope you win"

"Thank you, so do I"

41

Dairy Barn Ventilation

A good ventilating flue should possess all the essential features of a perfect chimney. The walls should be air tight so that no air can enter except through the stable. The top should rise well above the ridge of the roof and it is best, though not necessary, to place it near the centre of the stable. Whenever the length of the ventilator must be unusually short or it must be placed in any unfavorable position for a strong draft, then it should be made larger, to make good the other defects. Double-tongued and grooved lumber with acid and water proof paper between may be used to good advantage, but the lumber should be well seasoned and great care should be exercised by the carpenter in making the joints.

The top of a ventilator should be provided with a storm shield. This may be in the form of a simple roof. Care should be taken to place this high enough above the shaft so there is left abundant outlet across which the wind may at all times have free sweep. The lower end of the ventilating shaft should reach to or near the floor and should be provided with its main inlet for taking up foul air at the bottom. The size of this inlet should be equal or nearly equal to the cross section itself. The ventilating shaft should also be provided with an intake just below the ceiling and this should be provided with a door or lid so that it may be partly or completely closed at will. The object of the inlet at the ceiling is to make provision for the escape of the warm air at the ceiling at times when the stable may be too warm or at times when there is but little wind movement outside and the draft may need to be reinforced by the addition of warm air of the stable. When the ceiling is sufficiently tight it acts as a heated radiator, sending its warmth back upon the animals upon the floor, thus keeping the stable at a higher temperature than would be possible if the warm air were permitted to escape all at once at the ceiling.

Now to utilize the heat accumulated at the ceiling to the best advantage, the fresh, pure, cold air must be brought in at the level of the ceiling and caused to mingle with it as completely as possible so that the cold air may be warmed by the warm air before it drops to the level where the animals breathe it. To secure this, provision is made for the fresh air to come into the stable at a considerable number of small openings near the ceiling on as many sides of the barn as is practical. In order to prevent the warm air at the ceiling escaping through the intakes, they must be carried downward by some construction so that the air is forced to enter at some level on the outside, four feet or more below the level of the inside. This acts on the principle of the air trap, for the warm air of the stable cannot readily pass downward.—University of Ohio Bulletin.

"Can be depended upon" is an expression we all like to hear, and when it is used in connection with Chamberlain's Colic, Cholera and Diarrhoea Remedy it means that it never fails to cure diarrhoea, dysentery or bowel complaints. It is pleasant to take and equally valuable for children and adults. Sold by all dealers.

LIVE STOCK.

When Should a Pig be Killed ?

Much has been said and written on this subject, but no hard-and-fast rules can be laid down, because the best age for killing a pig depends not only on what it is wanted for, but the kind of pig it is and how it has been fed. There are, however, limits within which, as regards age and weight, the pig-feeder should keep, since young small pork can be produced more cheaply than older and heavier pork. There is no question in management more definitely settled than that it costs less per pound to make meat from a young animal than from an older one. This has been proved over and over again, not only by means of experiments and at the fat stock shows, but by all intelligent breeders of meat animals, and is apparent from the fact that to put a third hundred pounds on a pig already weighing two hundred, it must be given food of support for the latter weight while adding the hundred pounds. This means that the cost of producing a pound of gain in live weight increases as the animal becomes older and heavier, and that in the making of heavy hogs there is no profit. Not only does each pound of pork within certain limits cost more to produce, but it actually sells for less money, and reference to any market report will show a marked difference.

Probably few even among those cute enough to see the advantages of porker feeding realize how greatly the cost of production increases as the animal becomes heavier, or they would be still more keen on supplying the small, lean meat for which the modern consumer is willing to pay the higher price. If space permitted a mass of evidence could be adduced to demonstrate the increase in the cost of gain in weight as age and weight increase, but the results of a couple of experiments will suffice:—

Lawes and Gilbert, at Rothamsted, in a ten weeks ' feeding trial with pigs weighing 135 pounds each, and feeding to a weight of 275 lbs., found that at the start 386 pounds of food produced 100 pound live weight. At the end of four weeks 502 pounds were necessary, and in the ninth and tenth weeks 610 lbs. A similar experiment carried out at the Michigan station showed practically the same result, as during the first period of feeding 381 pounds of food produced 100 pounds of gain, and in the fifth period 508 pounds were required to produce the same result. In a feeding experiment conducted at the Ontario Agricultural College, although there were other matters involved besides the cost of producing each pound of gain in live weight, with which we are not concerned here, a good deal of light was thrown on this subject of cost. The test showed that while increasing in live weight from 54 pounds to 82 pounds the pigs required 3.10 pounds of meal per 1 pound of gain; while increasing from 82 pounds to 115 pounds they required 3.75 lbs. of meal per 1 pound of gain; while increasing from 115 pounds to 148 pounds they required 4.38 pounds of meal per 1 pound gain; and while increasing from 148 pounds to 170 pounds they required 4.55 pounds of meal per 1 pound gain. It is generally considered that well-bred pigs, eight or nine months old, weighing 200 pounds to 220 pounds live weight are thriving well if they yield one pound of dressed meat for every five pounds of meal consumed. Young pigs require much less. These figures go to show that the 8-stone to 10-stone porker costs less to feed than the larger animal, and we know that it sells for more money- a strong argument in favor of marketing pigs early. There are, of course, exceptions, as when more mature animals are required to clear up certain kinds of waste which younger animals could not deal with or could not digest; but in the case of the pig fed mainly on purchased meals the sooner he is got "fit" and "quitted" the better from the point of view of profit. Porkers and small baconers should be fit for the butcher almost from birth to death, but a bacon pig will probably be more profitable if it is killed at about six months old, assuming that skill and care have been brought to bear on getting it ready, than at the more common age of eight or nine months.

Breeding Ewes Should Receive Early Attention for Best Results.

A vital matter in successful management of breeding ewes during the later summer months is fitting the ewes for mating, says Leo. C. Reynolds in Tribune Farmer. Experienced flock owners will agree that the physical condition of the ewes at mating has a marked and permanent influence upon pregnancy, upon performance during the nursing period, and also upon the vigor of the young at birth. At this season of the year, when pastures are scant of sufficient supply of nutritious forage, and the ewes are suffering from the heavy draft upon their vitality from suckling their rapidly growing lambs, there is real danger on the part of flock owners overlooking the importance of giving special attention to fitting the ewes for mating.

A large number of valuable ewes fail every season to breed at first service or become barren on account of being in low flesh condition at mating.

It is a prevalent practice among flock owners at weaning time to direct attention to growing the lambs preparatory for marketing, and neglecting to arrange for the ewes to receive equally as good care. The breeding ewes first last and at all times should receive the flock owner's consideration. They are the foundation of his business and the direct means through which he has been able to secure his season's lamb crop, and the only means through which the work may be perpetuated.

No flock owner should mate ewes when declining in weight, vigor or vitality. If an animal is below normal in flesh condition nature prevents taking on additional burden until the system has regained sufficient strength to withstand the strain. On account of some ewes in the flock failing to breed many flock owners conceive the idea that they have become diseased, and not infrequently dispose of them. Had these ewes been properly cared for and recruited up to normal flesh condition after the lambs were weaned, in all probability they would have conceived at first service. I have encountered several instances in my flock where ewes were low in flesh at mating time and would not breed. After removing them from the flock and giving them special care and feed no trouble was encountered. Where a large number of ewes are allowed to run together one is taking great risk in not separating the weaker ewes from the stronger and giving them additional attention. There is nothing equal to clover pasture for the ewes after the lambs are weaned as a source of forage supply to aid the process of recruiting the system. Coarse pasture, like timothy and lowland grass, is undesirable. there is supplementary forage a hand it can be fed to great advantage.

The ram is generally in good flesh when turned into the flock at mating time, but the whole trouble lies with

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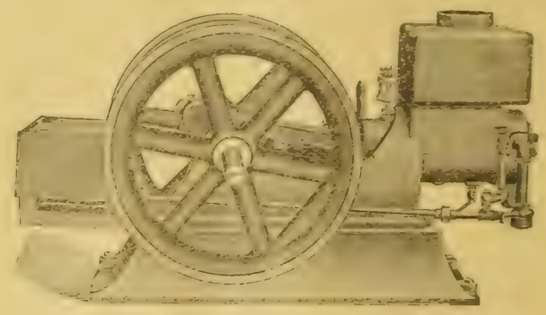
should take out an agency for the easiest selling Gasoline Engine on the market to-day. We refer to the

"WATERLOO BOY"

FROST PROOF STATIONARY ENGINE

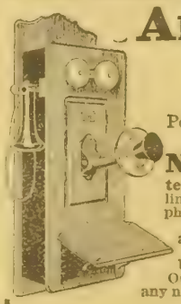
The most complete and up-to-date Gasoline Engine on the market to-day.

Write at once for full particulars. We will give you every assistance in making a sale. Don't delay, the territory you want might be taken if you wait until to-morrow.



I am a "Waterloo Boy" but can do the work of several horses.

J. D. FRIER, - Sussex, N. B.



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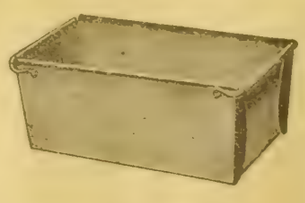

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Cannot burn, air chamber underneath. Excellent for loaf cake or pressed meats. Need not remove bread to cool. Simply let down sides of the pan and make clean cut with knife or remove without breaking. Will last a lifetime. Sent postpaid on receipt of 38 cents.

FREE—A useful article will be given free to any housewife for five minutes of her time.

Address, for particulars,

EDWIN J. TUCKER,

MIDDLETON, - - N. S.

Advertise in the Maritime Farmer.

the ewes that have been heavily worked during the season. If flock owners would endeavor to fit their ewes for mating as well as they do the ram there would be far less trouble and a much higher percentage of strong, vigorous lambs at lambing time.

There is an economic advantage in properly fitting the ewes for mating that no thoughtful flock owner can afford to ignore. After the ewes are separated from the lambs and are placed upon goad pasture they immediately begin to recruit in flesh and vitality. By the time the mating season arrives they are in a uniform healthy condition. In all probability they will be ready to mate within two or three weeks, and if nothing goes wrong very few of the ewes will return for second service, and what few do are generally the first to mate. Under these conditions the lambs will be dropped along about the same time the following spring, thus giving the flock owner a fine lot of material of uniform size and age with which to begin his season's work. It is a great deal easier and much more encouraging to handle a bunch of lambs that are about the same age than it is to have them all ages and sizes; but the economic advantage comes when ready for the market. Every flock owner knows that an even uniform bunch of lambs has a higher market value than a lot of various grades and ages. An even bunch of lambs will sell anywhere from a quarter to a cent higher on the market than they would if possessed of a wide variation of size and conformation.—Maine Farmer.

Rations for Fattening Cattle.

The Department of Agriculture for Ireland being impressed with the idea that much material benefit to Ireland would result if a larger proportion of the surplus cattle available for exportation were sent to the English markets in finished condition, instead of as stores, arranged for a deputation of Irish farmers to visit Scotland and report upon the dead meat trade of that country. The report of the deputation is published in the recent issue of the Journal of the Irish Department of Agriculture, and makes interesting reading. The following is an extract from it:—

The basis of feeding is essentially turnips and oat straw. Some farmers give the turnips to their cattle in the whole state, while others prefer to feed them sliced. All are, however, agreed that it is the turnips that go to lay on the solid furnishing of the carcass, and give the desired "marbling" and solidity of texture to the beef. Indeed, it is claimed that in this respect the quality of the turnips grown on the Aberdeenshire soil cannot be equalled for feeding value, and to this fact is due that the county possesses such a lead as a fat-cattle producing centre. Straw is solely relied upon as fodder. Any hay grown is sold off, and does not constitute, as in this country, even a part fodder-ing for the cattle which are being fattened. The concentrated feeding stuffs gipen are, to a large extent, home grown, though cake and cake meal are also widely employed. The following rations given at four different farms may be taken as typical:—

Ration No. 1.

6 a. m.—2 lb linseed cake, allowance of turnips, (sliced), straw foddering.
10 a. m.—Allowance of turnips, straw foddering.
4 p. m.—Allowance of turnips, 4 lb of rolled oats.
7 p. m.—Straw foddering.

Ration No. 2.

5 a. m.—4 lb. of cake.
7 a. m.—Allowance of turnips, (sliced), about 50 lb. each; straw.
1 p. m.—Similar quantity of turnips, straw.
4 p. m.—Similar quantity of turnips, straw.
7 p. m.—4 lb. mixture of crushed barley and oats moistened with diluted treacle.

Ration No. 3.

6 a. m.—Turnips, straw.
9 a. m.—4 lb. of barley meal and "prone"—i. e., oat husks moistened with diluted treacle.
4 p. m.—Turnips, straw.
7 p. m.—4 lb. barley meal mixture.

Ration No. 4.

6 a. m.—Turnips given whole, straw.
10 a. m.—Turnips given whole, straw.
4, p. m.— Turnips given whole, straw.
7 p. m.—46 lb. rolled oats moistened with diluted treacle.

The feature of tnese rations is the length of the feeding day and the fixed regularity of the hours at which the different feeds are given. It will be noticed that the quantity of roots consumed by a beast in the day is very high, more especially in rations Nos. 2 and 4. In the last case, where the turnips were given whole, the cattle being fed were strong three-year-old bullocks, and the cattleman simply wheeled a large heaped up barrowful of roots from the adjacent food house, and up ended it into the two troughs of each companion pair of bullocks. The cattle fed on this last system, moreover, invariably fetched top prices at the local sales, and the reason assigned for this by the feeder was the large quantity of turnips, which, as the purchasers were aware, the animals consumed during the feeding period. In this connection it was a matter of interest to note the reputation which individual farms possessed among buyers for the quality of the cattle finished on them. Evidently, when the system of feeding is known, the animals can be relied on to kill well, and this ensures top prices being obtained when cattle thus fattened appear in the auction ring.

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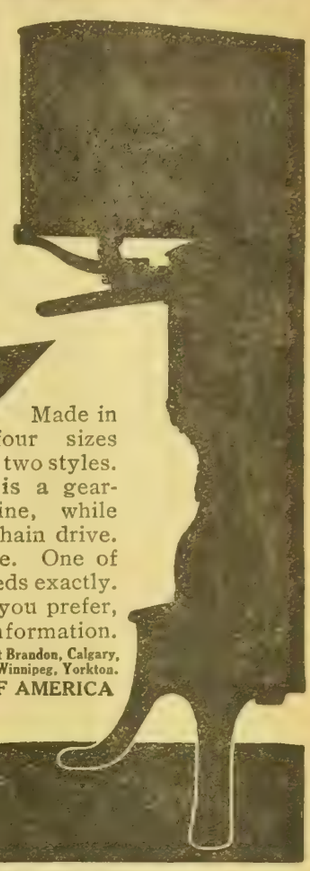

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COME AND SEE US.

THE HORSE.

The French Canadin Horse.

Horsemen in Canada are greatly interested in the recent action of the Federal Government at Ottawa in giving authority for the establishment of a stud book in which the French Canadian type of horse will be eligible for registration.

There was a time when this breed was distinctive of the Province of Quebec, but outcrosses with unsuitable stallions, chiefly Clydes and Belgians, have practically exterminated the type which once was predominant. There are, however, in a few districts some good specimens still, and an effort is to be made toward rehabilitating the breed.

The true French Canadian horse of half a century ago was a stout bodied horse on short legs. He had many of the qualities of the Morgan, although as a rule much larger than his American cousin, and there is little reason to doubt that many Morgans brought from Maine and Vermont across the Canadian border were used in the stud throughout Quebec and that some of the most prized of the French Canadian horses had a strong infusion of the Morgan blood. Their trappy action and lightness of foot showed that, it being no extraordinary thing to find horses of 1400 pounds and more capable of 2.40 speed, with the bend of the knee and the flex of the neck that are the delight of every man who knows the horse and what is most desirable in gait.

That the thoroughbred sires and mares brought from England by the cavalry officers in the early days were parent stock there is no disputing. The fine muzzles, clean throttles and broad, flat legs, with tendons like ivory, would be an open guide to any student of horse breeding, but there is still more tangible evidence in the knowledge gleaned from men of the type of the late Etienne St. Germain of this city, who bought and sold horses all over Quebec and Ontario for more than sixty-five years.

He handled thousands of the French Canadian horses and was an authority on the breed, the disappearance of which he never failed to deplore. His belief was that the sturdy mares brought from France by the original settlers of Quebec, crossed with the thoroughbreds and the Morgan, was the original blend, and as long as that policy was pursued Quebec held its pre-eminence as a horse producing province.

In the American civil war many thousands of the desirable animals which in any kind of service were bought by agents of the United States and sent to the front speedily became famous. The horses of that day from 1861 to 1866 were described by St. Germain in a conversation with the writer as being of an average weight of 1200 pounds. They had fine, small heads, with prominent eyes which gleamed like jewels.

Their ears were fine and ran to a point, and when they were raised the tips almost touched, so beautifully were they set. The throat was invariably fine even in the largest specimens, where any coarseness would be looked for, and the neck, while often short, was indicative of strength rather than of mongrel breeding. Their shoulders were well placed and the back so short and the coupling so close that the source of their marvelous strength was apparent at a glance.

They were long underneath and their muscular development in the arms, thighs and gaskins was what would be looked for in horses that were used in the lumber woods in the winter months and on the hilly farms and roads of Quebec in other seasons. Their feet were as hard as flint and of that gray-black hue which betokens perfect texture of horn. Their hips were broad and flat and a curb, spavin or split was a rarity, and ringbones as a hereditary blemish was unheard of, according to this expert.

Their most distinguished characteristic was heavy manes, tails and foretops, the hair of the former invariably falling to the point of the shoulder and often to the knee, while the bottom of the tail in many instances reached the ground. In the cases of the stallions the manes had to be turned on alternate sides of the neck in successive years to prevent the crest from being pulled out of shape, so heavy was the mass of hair.

Their strength was prodigious and for their inches they could outpull any horse in the world. Used in the heavy snows of the long winters, where they were often up to their backs in the lumber woods and sharply shod, it was a rare thing for them to cut themselves. The average coldblooded or mongrel horse will struggle when placed in a like position, and if shod sharply will tear his legs to pieces in a wild scramble to extricate himself.

CHARACTERISTICS.

Not so the French Canadian. He will settle down in the soft, yielding mass waiting the command of his driver, and when he is told to "marche" it is a picture to see him set his splendid shoulders in the collar and hang in the traces with muscles bulging until the load moves. There is none of the wild flying and plunging at the load which is characteristic of some horses. The Canuck knows how to utilize his strength, and once the load is in motion he keeps on until restrained.

When Sunday comes he takes the family to Mass at a round trot of from ten to twelve miles an hour, and perhaps on the road home if Francois Hippolyte or Jean Baptiste should happen along with a chip on his shoulder the nags can put up a spirited race and show a matchless purity of action, for they all have that round, hoop-like swing that carries them over the ground without boot or weight, and shod by the country blacksmith in any style his native fancy dictates, the trotting instinct is there.

Is it any wonder that the French Canadian is jubliant about the coming rejuvenation of the breed? The marvel is that the good people of this province were so short sighted as to be led astray by experiments which well nigh cost them the extermination of their prized type. That they have become wildly enthusiastic over the work begun by Dr. Rutherford, the chief veterinarian of the Dominion Government, who, together with Dr. Couture of Quebec, and William P. Kearney of this city, has been chiefly responsible for bringing the attention of the government to the importance of the enterprise, goes without saying.

There is to be a rounding up of the desirable types, which will be registered, and it has been decided that the thoroughbred and the standard bred (trotter) will be utilized in the rehabilitation of the strain. Stallions of these breeds must come up to a certain standard of excellence before they will be accepted. Dr. Rutherford is a capable official and in his hands the work will be well done.

Some of the best types of the French Canadian horse now found are owned on this island, while the country around Three Rivers has always had a few that were considered representative by those who have made a study of the breed. The writer while walking along the Cote de Lisse road on the Island of Montreal one day last spring was attracted by a handsome black mare which stood in a paddock not far from the highway.

A farmer was ploughing in an adjacent field and when questioned he told the mare's history. She had decended in an unbroken line from stock which had been raised on the same farm for more than a hundred years, and the eyes of the habitant sparkled as he recited the deeds of the mare and her antecedents. She was heavy with foal and the breeze blew her luxuriant mane and tail about her as she dozed in the brilliant sunshine. She had been bred to a famous horse of her own color. She was a perfect type, and her owner will undoubtedly find a place for her and her progeny in the new register.

The fame of the French Canadian horse, however, has not been confined to the Province of Quebec. Dr. G. J. Fitzgerald, who now lives at London, Ont., brought to the county of Middlesex in the late '60s and early '70s some of the best specimens obtainable. Some of them were sent to Ohio, where, particularly in Cuyahoga county, their descendants are yet to be found. Many of the best of the breed are black and the best of these horses taken to Ontario were of that color.

Rocket and Diamond were blacks, Little Joe Sauvage and Richelieu Tom were bays. Rocket was a phenomenal horse and if you should ask any of the old time farmers well beyond the three score and ten mark in the counties of Middlesex or Huron what was the best general purpose horse he ever saw he would without a moment's hesitation say "Black Rocket."

Dr. Fitzgerald bought this remarkable horse from a farmer near Pointe Caire, a few miles from this city. He was four years old, black as a raven, except for a star in the forehead. He stood about 15.2½ hands high, but was of such massive build that he weighed upward of 1,500 pounds. He was as near perfection in conformation and disposition as could be imagined, and he had the splendid mane and tail of his tribe.

It sounds almost incredible but it is nevertheless true that he could trot a quarter close to a 2.25 gait, and in motion he was something never to be forgotten. He was owned by Dr. Fitzgerald until he was 18 years of age and the day he was sold there wasn't a pimple on his perfect legs. He had been worked in the woods many winters, could handle his cord and a half of green beech or maple on a pung and, although a stallion, could be driven anywhere at any time, single or double, by man, woman or child.

He left his impress so indelibly on the horses of the counties of eastern Ontario that to this day his decendants are known by the characteristics which made their sires famous. Many of them are fast trotters and the dams are highly prized as brood mares.

The experiment of re-establishing the French Canadian breed of horses will be worth while.—American Horseman.

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POULTRY.

Preparing Poultry For Market.

TIME TO FATTEN.

The most profitable age to fatten poultry is between three and four months old, though birds of almost any age may be fattened. The idea is to have them plump and well fleshed.

FATTENING CRATES.

Chickens for fattening should be placed in crates. These crates are generally made six feet long, sixteen inches wide and twenty inches high, divided into three compartments, each compartment holding four birds. Set the crates on stands four feet from the ground. Each crate may carry a light "V" shaped trough two and a half inches deep. The bottom of the trough is four inches above the bottom of the crate and the upper inside edge two inches from the crate.

FEEDS.

A very palatable and effective ration may be made of two parts of ground oats and one part corn; or, equal parts of ground oats, ground corn and ground buckwheat or two parts flour, two parts ground barley and one part wheat bran, mixed with skim milk, sour milk or butter milk to a thin porridge. A quantity of meat meal, beef scraps and grain should be mixed with the mash on alternate days.

On the first day mix some Epsom Salts in the drinking water, and for a couple of days feed lightly, the food being given twice daily, and after the birds have eaten what they require, troughs should be removed or cleaned. Quantities of fresh water must be supplied constantly, and also grit two or three times per week.

MARKET REQUIREMENTS.

In fattening chickens, the object should be to conform, as nearly as possible, to market requirements. The breast, in shape, should be long and broad, giving the bird a plump appearance. Short legs, indicating the low blocky type, are a good feature. The leg should form as small a proportion of the weight as possible, because the meat is largely composed of sinew, and therefore inferior. The bones should be small and well rounded. About four lbs. is the preferred weight of dressed fatted chickens, and as the gain in live weight made by birds range from one to two pounds per bird during the fattening period, it is never difficult to calculate the amount of work necessary.

FASTING.

A mistake which results in the spoiling of many promising birds is killing them when their crops are full. Green spots of decomposition on the flesh can invariably be traced to the fact that the birds were not fasted. Birds must fast for at least twenty-four hours, preferably thirty-six, before killing, so as to completely empty their crops and intestines. This is a point about which one cannot be too particular.

KILLING.

Never kill by decapitating. This is a disgusting and unsanitary method. The neck invariably crooks upward and stops the flow of blood, causing the formation of clots, which produce coagulation. Furthermore, the exposed portion of the neck leads to early decomposition and spoiling of the flesh.

The simplest and surest method of killing is by cutting through the roof of the mouth by means of a sharp knife. If the operation is correctly performed, death follows instantly, and all blood flows through the mouth from the body.

Hold the bird under the left arm, and with your thumb on the neck force open the mouth. Insert the knife with the right hand, first severing one artery, and then the other, and next pierce the brain, it being necessary to drive the knife through the roof of the mouth towards the top of the head. If the work is done properly, the bird will shiver and give a convulsive flutter—it is paralyzed for the instant, and dead.

PLUCKING.

All birds must be dry plucked. Scalding is not necessary because the appearance of the fowl is destroyed.

To dry pluck is a simple and easy task, the only provision being that all feathers must be removed before the carcass has cooled. Having the bird suspended, head downwards at a convenient height, its back towards the operator, grasp the wings with one hand and pull the long feathers with the other. To remove the wing feathers pull downward quickly. The stiff feathers at the shoulder joints are pulled upward. With the thumb and forefinger around each shank, remove the feathers from the thighs by bringing the hands towards the body. Roll the feathers from the back, using both hands, beginning at the tail and passing down by the wings and around to the breast. Turn the bird and perform the same operation on the other side. Strip the feathers from the neck, leaving a band two and a half inches wide near the head. A bunch of feathers should also be left to cover the leg joints, and the last two small flight feathers, as well as the small feathers on the tip of the wings, should be left on. Pin feathers may be removed with a blunt edged knife.

PLUMPING OR SHAPING.

Shaping a bird means giving it a plump, attractive appearance, in other words, showing it compactly to best advantage. A shaping frame is made by nailing two six-inch by seven-eighth-inch planed boards together at right angles, forming a trough. The trough may be made six feet long and nailed into a frame Have it inclined slightly backwards.

A bird should be shaped as soon as it is plucked. The wings are folded by turning the tips behind the shoulder, and the legs are placed alongside the breast. The bird is forced into the angle of the shaper, breast downward, then covered with paper, and a weight is placed on the back to hold it down. Care should be exercised to shape and cool the birds in as low a temperature as possible, about six to twelve hours usually being sufficient.

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PACKING DRESSED FOWLS.

Poultry must be packed neatly and carefully in clean boxes or barrels. Line the inside of the packing case with parchment paper—never use newspaper—and allow a good quantity to extend over the edges to be used as a top covering. In packing the first row of birds are laid with backs downward, and the second row are laid with breasts and heads extended across between the birds of the first row.

The name and address of the shipper, the number of birds, kind and weight should be plainly marked across the top of the box.

FATTENING DUCKS.

Keep ducks in small pens. Do not permit them to swim; feed them a good food in sloppy condition; have plenty of drinking water at hand, for a duck will take all the food it can and then clean the passage to the crop by drinking freely, when it will again return to the food, and continue to eat until it can eat no more. Food must not be left before ducks continuously, but should be fed regularly. If the above instructions are followed ducks will be in prime condition in ten days or less.

FATTENING GEESE.

Geese will not stand confinement, and if placed in a limited run and not being permitted to swim, in fact, given practically the same conditions as ducks, they will show like results.

FATTENING TURKEYS.

The best way to keep turkeys from roaming is to give them a small, rich range, such as clover and fed a rich range, such as clover and feed a and night.

The instructions given above with reference to the killing, plucking and shaping of chickens are equally applicable in the case of turkeys, ducks and geese.

SHIPPING LIVE POULTRY.

Great quantities of poultry are purchased alive by our agents and this manner of selling is becoming general. Good quality, well fatted, live poultry will always bring a high price. Live poultry is bought by the pound, and the method is fairer to both the raiser and the purchaser because the value placed upon the fowl is then not approximate but true.

Shipping crates for live poultry should be roomy and comfortable, constructed of light material and yet strong enough to stand a certain amount of rough usage. If large crates are used, these should be partitioned so that the birds will not be thrown against each other towards the sides or ends. Suffocation and death very often results from the tilting of the open coops, which allow the birds to fall on top of each other.

In making up a crate of live poultry for shipment, it is best to place birds of a uniform size in each, and never ship old and young stock together, nor birds of different sexes. Diseased or emaciated stock must never, under any consideration, be shipped with a bunch of live poultry. Such a practice is malicious and dishonest. The person who is guilty of it is injuring his reputation. Furthermore, very often a contagious disease will spread through the whole shipment. All diseased birds will be culled.

Shipper should always place his name on the crate together with the number and weight of the birds contained in it.—From instructions sent out by the Poultry Yards of Canada, Limited, Pembroke, Ont.

THE FARM HOME

This Department is now being edited by a very competent lady, who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Mrs. Bowen's Investment.

By Alice B. Haven.

Store is no sore.—Old Proverb.

Mrs. Bowen stood in her kitchen and pondered, in rather a disconsolate mood. It was Monday morning in November, a large wash in progress, Hannah—the "help"—cross because of the extra tablecloths and sheets, occasioned by two unexpected visitors the week before. There was a quilt, too, that Johnny had muddied with unlawful climbing on the bed, and so get an apple on the bureau, and Kate had slipped down and ruined Monday's clean petticoats, so that there were two sets for her in the wash. The tin boiler bubbled and upheaved, so did Hannah's wrath, with every garment that she plunged into her tub, the same slow, determined, spiteful ebullition.

Mrs. Bowen was making up her mind on the dinner question. There was cold meat, of course, from Sunday's roast; but cold meat needs trimmings to render it acceptable to mankind in general, and besides Mr. Bowen, there was his mother who was twice as particular, not from a desire to be disagreeable, but because, as an invalid, her appetite was sickly and variable.

Now it is comparatively easy to walk into a good market, with a boy behind you to carry the basket and no compunctions as to prices, and lay out your dinner; but when your only market is a grocery, where they decline sending home parcels, and it is not the habit of the place in which you live for a housekeeper in respectable circumstances to carry pots of butter and a bunch of turnips, say, through the streets, it is a little puzzling to arrange a meal to the satisfaction of yourself and anybody else, especially when one dollar has to do the duty of five.

"I think," said Mrs. Bowen, slowly, "I think, Hannah, we will have some potatoes and, and—let me see, well, turnips."

"The potatoes is all out, ma'am—only two turnips and a half left from Saturday. I don't see why squash, and them cold baked beans, warmed up, won't do."

"Mother Bowen never eats squash, you know, Hannah, and we had squash yesterday. I must make some change."

"I can't stop and go and dress, no how!" And Hannah plunged into her tub after a batch of dinner aprons, and rubbed them to within a thread of their lives.

"Why can't you go as you are?" suggested Mrs. Bowen mildly. "Put on a dry apron, and unpin your frock."

"I'd like to see myself going into the streets looking like this! Well, I would!"

"Dear me, Hannah," said Mrs. Bowen, driven beyond the limit of caution by this determined resistance, "who do you suppose ever looked at you?"

"'Nuff sight better people than comes to this house!" And the "help" wrung the suds from her hands with a jerk, to poke down the bubbling, upheaved garments in the boiler, most vigorously. "S'pose I'm going by the carpenter's shop in an old wash-dress? No I ain't—nor the blacksmith's, either, with all them fellers standing 'round. If I've got to go, I've got to dress—that's the hull of it!"

"Well, do hurry, Hannah, for it's a bad drying day, any how; I don't believe you will get the colored clothes out before it rains. A peck of potatoes and a half a peck of turnips—oh, and, Hannah, some carrots to stew the meat with. Mother Bowen cannot eat cold mutton. Oh, and, Hannah, there's no whole pepper for the stew either; and get a paper of cinnamon; there was none when I made those apple pies on Saturday."

Hannah's toilet was not readily accomplished. Mrs. Bowen looked at the clock, and poked the clothes, and made a faint essay at the vacant washtub. It took her handmaid just a quarter of an hour to prepare herself to face the carpenter's shop; it was twenty minutes more before she returned—half past ten. In the mean time Mrs. Bowen thought to save time by getting her pudding ready—a tapioca-pudding, as Mother Bowen considered it "nourishing;" but there were no eggs in the house, and Hannah was out of call. What could be made without eggs? Baked Indian pudding? But that required so much milk—more than could be spared. Apple and tapioca? There was not time for it. Apple dumplings would take up room on the stove, and washing days there was none to spare. If she only had those eggs; so many things could be made with eggs, nothing, it seemed to her, without them. The whole twenty minutes was lost in opening boxes that were either empty or nearly so, and ransacking her brain and her cook book for something that could be made with no eggs and very little sugar, for that last seven pounds of brown sugar seemed to last no time at all.

"Might have kept up the fire, at all events," muttered Hannah, setting down the basket with a thump.

Sure enough the fire was "way down;" the boiler had to come off, and it was eleven o'clock before steam was got up again, and Hannah once more arrayed for her post.

"Where's the carrots, Eliza? I don't find any in the stew," inquired Mr. Bowen, when dinner was at last served, and his wife, who had been cook, sat down, flushed and worried, for it was late and the children clamorously hungry.

"Hannah forgot to get any at the store, and I could not spare her to go back again."

"Humph! I'd like to see one of my 'prentices forgetting orders. Nobody ever heard of a mutton stew without carrots. Miserable potatoes too."

"Yes, there was a great deal of waste in them; and Mr. Bennet charges outrageously. Hannah didn't bring home a cent of change. I don't think he treats us well; I wouldn't deal with him any longer."

"Must, as long as he does with me; you ought to send him word. Turnips! I thought you were going to have cabbage."

"Cabbage is worse than turnips, James," said Mrs. Bowen, senior, feebly, "and the potatoes are so watery. I don't see anything I can eat. No, thank you, I'll wait for the pudding."

"I'm very sorry," Mrs. Bowen began. "Hush, Kate! Mr. Bowen, please speak to those children. I couldn't make the pudding, mother."

The old lady pushed away her plate with an injured look. "Its of no consequence; I can do just as well without eating. When people are too old to work, they hadn't ought to eat, I suppose. Don't never trouble yourself to get anything for me."

"I should think, Eliza, that mother might have the little she wants. I can do without myself, but my mother isn't going to, so long as she lives under my roof."

Feeling all the injustice of the implied reproach from both, and knowing, moreover, how hard she had toiled, Hannah being "as contrary as possible" after her interruption, an angry reply rose to Mrs. Bowen's lips; but she caught the quick eyes of both the children raised to hers, Kate defiantly ready to take sides against "grandmother," whose feebleness sadly interfered with the noisy play of herself and her school companions. "They must not see us quarrel," thought she, remembering the miseries of her own childhood, and how much of filial respect was lost by her from this very cause but her manner was cold and repellant, and the first part of the meal passed in silence.

Kate sprang up willingly enough to help remove the meat and vegetables. She was always ready for dessert, and followed her mother into the kitchen to find out what it was to be. "Boiled rice and molasses! Is that all?"

"I'm so sick of rice, it seems to me I could never taste another mouthful," groaned Mother Bowen, from the next room.

"It's too bad, mother," responded her son, warmly; "I don't see what Eliza was thinking about. If that's all there is"—and he pushed his chair from the table— "I'll be off. I should think Eliza, you might contrive something a little different."

Mrs. Bowen felt very much like breaking down into a cry, as her husband took his hat and departed for the store, without another word, and his mother settled back into her rocking chair and drew out her knitting work. This was the result of a morning's work and contrivance to say nothing of Hannah's impertinent muttering; and yet, scarce as help was, she could not dispense with so neat and active a girl for one fault of temper, especially as Mother Bowen needed so much waiting on."

"Old people's a dreadful trouble, I know, Eliza." And the trembling fingers shook more than ever, as they untangled a knot in the yarn. "I never wanted to outlive my usefulness—never. I'm as great a trial to myself as to anyone else though. It's very hard to feel that you're in everybody's way, and no use to nobody; I hope you'll never live to be old and feel it; but it's likely you will, though, it's likely you will, and then you'll reflect—"

"I think rice and boiled molasses is first rate, grandma? Hadn't you better have a plateful? Give me some more, mother." And Master John "backed up his plate" as he said this, so did Kate, for all her disappointment; and Mrs. Bowen, refilling them, thought what a blessing strength and a healthy appetite was, and then more particularly of the worn-out body that made a querulous mind.

"It was too bad, mother, when you had set your heart on the pudding," she said. "I was as much disappointed as you was; but it was washing day you know, and I did not find out about the eggs until Hannah was gone, and it takes her so long to go to the grocery. Shan't I go and make you a cup of tea and some milk toast?"—for, doing without the pudding milk was fortunately at hand.

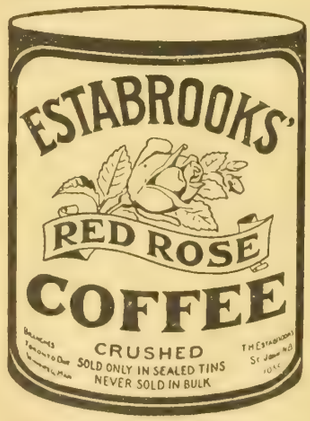
"I don't care if I do have a cup of tea; I feel dreadful gone, somehow. But don't trouble yourself to wait on me; eat your own dinner, eat your own dinner; when people get old and useless, they can't expect to be waited on."

Mrs. Bowen's dinner had been light enough. It was often so of late. What with looking to see if Mr. Bowen liked his, and Mother Bowen could eat hers, and that the children were not soiling the tablecloth so that Hannah would be up in arms, and keeping one ear in the kitchen for breakages and the like, she forgot that no one offered to help her, or to ask to be helped, if she happened to notice that her plate was empty.

As for Mr. Bowen, he was as much absorbed in business as any Wall Street financier, or Broadway jobber. The town was growing since the Erie railway had been finished, and trade grew with it. Of late, too he had commenced manufacturing boots and shoes for the Southern market. He was not above work himself, although he had a shop full of apprentices and journeymen; and then, too, his trips to the city for materials added the little change and stimulus that helped him to the brisk, bustling way which told you in five minutes that he was a money-making man. "Yes," he remarked that very afternoon, to his friend, Mr. Gerry, who often dropped in to bask in the genial heat of the great cylinder stove, on the very comfortable lounge provided for lady customers—"yes, Gerry, I don't think I'd change with any man I know. I don't believe there's a man outside of New York that's got better credit than I have in the Swamp, though I say it myself. There's Jones & Mudford, one of the oldest firms in the city. 'Come right straight to us,' says Mr. Jones, 'always, Mr. Bowen, and we'll do as well by you as anybody can. We don't want your money, we want your custom; that's what we want; I'd like to find a few more of the same sort.' Now, that's what I call gratifying—ha, Gerry?"

"Very," responded Mr. Gerry, elevating his feet to the fender of the glowing cylinder, and his eyes to the arabesque of boots and shoes on the wall overhead.

There is a convenience in using Estabrooks' Coffee because you can buy it in nearly every store and the quality is the same wherever you buy it. The double sealed tin keeps it in perfect condition until you get it. Buy Estabrooks' Coffee and you are sure of coffee at its best.



Sold only in 1 and ½ lb. tins.

Try it for breakfast to-morrow

76

Dr Morse's Indian Root Pills positively cure Constipation and all Kindred & resulting troubles. 25¢ a box 16

SEALED TENDERS addressed to the undersigned and endorsed "Tender for Extension to Breakwater at Dipper Harbour, N. B.," will be received at this office until 4.00 P. M., on Monday, September 26, 1910, for the construction of an Extension to the Breakwater at Dipper Harbor, St. John County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department and at the offices of E. T. P. Shewen, Esq., District Engineer, St. John, N. B. Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on Application to the Postmaster at Dipper Harbour.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, stating their occupations and places of residence. In the case of firms, the actual signature, the nature of the occupation, and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honorable the Minister of Public Works, for the sum of two thousand one hundred ($2,100.00), dollars, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By order,
R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, August 24th, 1910.

Newspapapers will not be paid for this advertisement if they insert it without authority from the Department.

I was cured of Rheumatic Gout by MINARD'S LINIMENT.
ANDREW KING.
Halifax.

I was cured of Acute Bronchitis by MINARD'S LINIMENT.
Lt.-Col. C. CREWE READ.
Sussex.

I was cured of acute Rheumatism by MINARD'S LINIMENT.
C. S. BILLING.
Markham, Ont.

F. C. WESLEY CO.
ARTISTS, ENGRAVERS, and ELECTROTYPERS.
59 Water Street,
St. John, N. B.

"Then, too, there's my wife; many a man's been ruined by his wife. Mine don't spend one cent on nonsense; don't catch her with flounces and furbelows. Every dollar goes right straight into my business; that's the secret of it, you see. I get the best of stock, and plenty of it, and then I can afford to work reasonable; why, there isn't another man in Plumville can begin to manufacture alongside of me. There's Toby, now—"

"Oh, he couldn't lay a straw in your path; he never has what a man wants. I see him coming out here, every now and then, with a lot of findings."

"That's it, you see. He don't get ahead enough to buy his stock to good advantage; and half the time he gets shaved by some of those outside fellows he deals with. Shiftless kind of man. Runs to New York twice as often as I do, and spends just so much time and money.

This little conversation having taken place in the lull of the day's work, just before teatime, Mr. Bowen proceeded home to partake of that social meal, in the complacent mood which is the result of recounting one's successful achievements, and quite ready to overlook the failure at dinner. He expected at least, hot biscuit to atone for it, but, on the contrary, he found only baker's bread, and he hated baker's bread.

"Flour out, hey? Seems to me fourteen pounds of flour ought to last longer than all this comes to! Not much butter to help it down with, either!"

"It is all there was in the house, and Johnny did not get home from school in time to send to the grocery,' said Mrs. Bowen, patiently.

"You know you never like to have us borrow."

"No, borrow, no! Go without, twice over; but, I must say, I never saw such providing in my life."

"I had enough, I thought, but Mrs. Toby sent in to get enough for tea, and I never like to refuse her, you know; so I told Hannah to let her have it, without going to see."

"There's a family that's always borrowing; she must be as shiftless as her husband."

"The Toby's never did get ahead," remarked Mother Bowen. "'Tain't in them. Old 'Lias Toby, now, started in business the same time with your father, and wasn't worth a cent when he died. Some folks just live from hand to mouth.

"A pretty miserable way of living." And reflections of his own forethought and freehandedness supplied the place of sauce to the scanty tea-table; though John and Kate, whose imaginations, however active, could not delude them on this subject, demanded the molasses pitcher, to make up deficiencies.

"Not a rag of clothes dry enough to iron," Hannah stated, encouragingly, as Mrs. Bowen went to inspect the progress of affairs, next morning. "I hung them tablecloths up in the garret and them starched things 'round the stove; jist look at 'em, might as well be right out of the tub this minute. That comes of leaving clothes in the middle of the day to run to the store."

"I know it, Hannah, but we must do the best we can. There's some one knocking; go to the door, for mother never would hear, and Kate has gone to school."

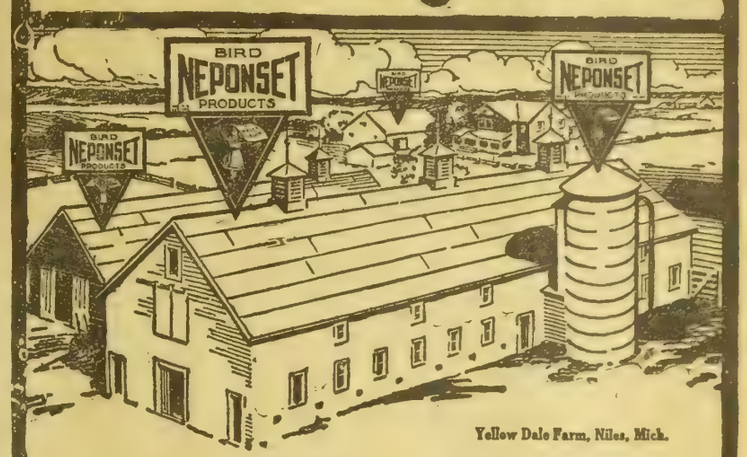
Mrs. Bowen "felt" the damp garments one by one, without the least brightening of the prospect. Hannah returned presently, ushering in a little girl, with a deep cape bonnet, and a quantity of school books piled up on her arm.

"Mother sends her compliments, Miss Bowen, and, if its convenient, she'll come and take tea with you. Jane's gone off again," she added by way of explanation, entirely on her own account, and I heard mother say to father, that when we didn't have a girl was a good time to go a visiting, and Sallie and me could come too."

Now, it was not in the least "convenient," with the ironing so far behind. Usually, the clothes were all folded down on Monday night, ready to commence by nine o'clock on Tuesday, when Mrs. Bowen did the fine things and her husband's shirts; but if she should say so, Mrs. Gerry would take mortal offence, especially in the present posture of affairs.

(Continued next issue.)

Are You Going to Build?



Yellow Dale Farm, Niles, Mich.

Buy Your Roofing on *Proof*—Not Claim

The one and only basis on which you can afford to choose your roofing is that of *proof*—proof of what it *has done*, not claims of what it *may* do.

Do not be deceived by extravagant claims and high-sounding guarantees. They are merely made for lack of proofs of what a roofing has done. Insist upon seeing roofs that have given satisfaction for years.

We can point out roofs of proof, right near you, where Neponset PAROID Roofing has lasted as long as the highest-grade shingles. It has been on Government buildings, dairy barns, stables, poultry buildings and railroad and industrial buildings everywhere for over a decade. We have been in one line of business for over a century and the experience gained in all that time is back of

NEPONSET PAROID ROOFING

NEPONSET Roofings enable you to choose the roofing that best meets your needs. There are different roofings for different types of buildings.

NEPONSET PAROID Roofing for barns and general farm buildings. Slate in color. Does not taint rain water. Resists fire.

For such poultry buildings, brooder houses, sheds and temporary buildings as require low-cost roofing, you will find that NEPONSET RED-ROPE Roofing lasts three times longer than tarred felts.

NEPONSET PROSLATE Roofing and Siding for residences and all buildings requiring an artistic roof or siding. Rich-brown in color, much more attractive and lasting than shingles.

Each roll of Bird NEPONSET Roofing contains directions for laying and complete fixtures, including square metal caps.

NEPONSET WATERPROOF Building Paper under clapboards, shingles, slate, metal, etc., insulates against exterior cold, heat and dampness. It costs little and cuts the fuel bill one-third every winter.

These are facts and not claims—write us and we will prove every statement

Consult Our Building Counsel Department—tell us the nature of the buildings you propose to erect or repair, and we'll send you the Bird NEPONSET Book which treats your special case. There are dealers in Bird NEPONSET Products everywhere. If you do not know the one in your locality, write us and we'll tell you.

F. W. BIRD & SON, 501 Lottridge St., Hamilton, Ont.

Established 1795. Originators of Complete Ready Roofings and Waterproof building papers. Winnipeg, 123 Bannatyne Street; Montreal and 144 Union St., St. John, N. B; East Walpole, Mass.; New York; Washington;, Chicago; Portland, Ore.

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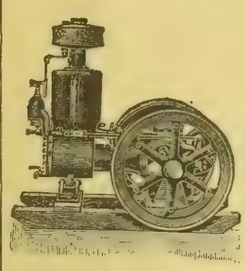
The Simplest
Gasoline Engine?
Look at the cut



The 'Stickney'

is known from the Atlantic to the Pacific because it is the farmers favorite. *So Simple.*
No Pipes and Separate Tank always in the way.

Strong and Heavy—Means hard work.

Send for our little booklet No. 57 and you will be surprised what you will discover about engines.

WINDMILLS, GRINDERS, TANKS, PUMPS, Etc.

Ontario Wind Engine and Pump Co., Ltd., Toronto, Ont.

G. J. Barrett { Sales Agent } 32 Dock St. St. John, N. B. Branch at Fredericton, N. B.

Teacher—Now do you see the difference between animal instinct and human reason?

Bright Boy—Yes'm. If we had instinct we'd know everything we needed to without learning it; but we've got reason, and have to study ourselves mos' blind or be a fool.

CHINESE STARCH

This is the kind of starch you require to meke Ironing Day easy and your linen stiff and glossy. You do not require to mix any other thing with this Starch to give the above results.

Retail Price, 10c per Pound Package.

If your grocer does not keep it, send 5c for sample box. Address :

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MESSRS BAIRD & PETERS, St. John, N. B.

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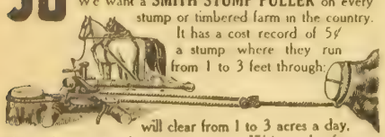
30 DAYS FREE TRIAL

We want a SMITH STUMP PULLER on every stump or timbered farm in the country. It has a cost record of 5¢ a stump where they run from 1 to 3 feet through.



will clear from 1 to 3 acres a day, doing the work of twenty men. Write today for our catalogue and FREE TRIAL PROPOSITION

W. SMITH GRUBBER CO. 3 Smith Sta., La Crescent, Minn.

PILES CURED at HOME by New Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309, Windsor, Ont.

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Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements.

London Concrete Machinery Co., Ltd., 19 Marmora Street.
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Largest Manufacturers of Concrete Machinery in Canada

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Dealer in Meat, Poultry, Produce, etc. All consignments carefully attended to and returns are promptly made as soon as goods are sold.

FOR SALE.

100,000 Apple trees, 75,000 Pears, Plum, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agente wanted on vacant territory, selling for fall and spring 1911 delivery.

THOS. W. BOWMAN & SON CO., LTD.
Ridgeville, Ont.

Our New Catalogue is ready for distribution.

Send Name and Address for a Copy

ST. JOHN SUMMER COLLEGE

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INVENTIONS

Thoroughly protected by patent in all countries. EGERTON R. CASE, Registered U. S. Patent Attorney, TEMPLE BUILDING, TORONTO. Booklet on patents and drawing sheet on request.

Flesh Flies.

When the sheep's wool becomes filthy and the skin irritated an ideal condition is made for the work of the maggot fly. And when the maggots get a start they create a more and more friendly harbor for their kind as they work and increase in numbers under the wool. A sheep infected with maggots is a most pitiful sight, helpless against the parasites eating out its flesh until the sheep dies, its life gnawed out in a most cruel manner. For the sake of humanity if for no other reason sheep should be saved from such suffering. These flies can do no damage if not given a suitable place to lay their eggs. Sheep should be watched carefully, especially in warm damp weather, and dirty tag-locks or other filth clipped off and a little tar dabbed on if the skin is chafed. These maggots also get in their work under rams' horns. Indeed a ram with heavy horns lying close to his head will hardly pass through a summer without infection unless the flies are kept away by putting some tar on the rams' head.

An infected sheep can be told by the fact that it refuses to eat, stands with its head down and most often by itself, and stamps its feet or jerks its head exactly as irritation by maggots would lead one to expect. The remedy is simple. Cut away the wool close. Clean out all maggots, using turpentine to wash them out. Smear the place thoroughly with tar. Then keep watch of the sheep to see that the flies do not again start in the same place. Thoroughness in cleaning out the parasites is essential, for one left in will start the damage all over.—National Stockman.

Breads and Raised Doughs.

Too much sugar will make the dough so dense that it cannot expand rapidly; an excess of flour or fats will have the same effect. The three most important points to consider where yeast is used, are, first, the time one can allow for the risings; second, the temperature; and third, the quantity of yeast, for where one is diminished the others should be increased.

Too much salt in the sponge will prevent the growth of the yeast. We know that yeast is a plant, and any plant life must be given the proper conditions for its development, if we desire the best results. A good fresh yeast cake should be hard and break like cheese, if soft, it is bad.

Yeast breads are extremely unwholesome if insufficiently baked. Unless the yeast is completely killed in the baking, it goes on fermenting, and this fermentation continues in the stomach, causing very serious disorders. Toast and zwieback are easily digested, because of the double baking they receive. There is no reason why hot bread should not be quite as wholesome and digestible as cold, provided it is thoroughly baked. It is not the temperature of the bread, but its condition, that affects us. Hot bread disagrees with many persons only because they eat it more rapidly; it is softer and is swallowed before being thoroughly masticated and insalivated. A stale,

I Present to You a "Health Belt Man"

He is 55 Years "Young."

Yes, 55 years young; not 55 old for My Health Belt poured vitality into his blood, nerves and tissue until

HIS VIGOR WAS RESTORED

My marvellous HEALTH BELT is a Wizard Worker, a mechanical self-treatment of the highest therapeutic value. It stands by you and never abandons its task until you are brought back to a state of vigorous Manhood, without an ache, pain or weakness. No drugs, no dieting, no restrictions of any sort, excepting that all dissipation must cease. Worn during the time you are sleeping, it opens its flood gates and drives a great, soft, warm stream of electric-vitality into your blood, nerve and weakened organs throughout the entire night; you sleep better for its use; it cures forever the weakness in your back; it seeks out and expels from your system all rheumatic pains. The electro-suspensory attachment is there for a purpose; it is the strong feature of my Health Belt, and delivers the electro-vitality to the parts most needing it. Courage, ambition,

and a new view of life, with full self-confidence, surely result. It makes you young and keeps you young, with the fire and vigor of the biggest, fullest blooded man you ever saw. The "HEALTH BELT MAN" cannot grow old, for he knows the secret of perpetual youth. It will place you in the "feeling fine class." "I am a man again, thanks to your wonder-working Health Belt. Use my name as you see fit." So writes C. L. Snell, of Middleport, N. Y. So have said thousands before him.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it does't do the work.

These Wonder Books are

FREE

Call or write for them to-day

Fill in the coupon and let me get these wonder Health Books into your hands. They are sent free, sealed, by mail, and give certain health and nature facts which every man (young, middle aged or old) should have. They fully describe my Health Belt, and are beautifully illustrated. I have known 100,000 men who sought my aid—I should know you.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs,—Please forward me your books as advertised Free.

NAME.....

ADDRESS.....

Advertise in the Maritime Farmer for Results.

HIS FACE AND NECK WERE COVERED WITH PIMPLES

Pimples are caused by bad blood. There is only one way to get rid of them, outward applications are no good, and that is to get at the seat of the trouble, by using a good reliable blood medicine.

Burdock Blood Bitters has been on the market for over 30 years, and is one of the most reliable blood cleansers procurable.

It removes all the poisonous matter from the blood, and leaves a beautiful clear complexion.

Mr. Philip S. Cobb, Crapaud, P.E.I., writes: "About a year ago my neck and face were entirely covered with pimples, and having tried nearly every medicine I could think of, and getting no relief, I at last thought of Burdock Blood Bitters and decided to try a bottle.

"After the first bottle was done the pimples were almost gone, so I got another and after finishing it they entirely disappeared, and I now have a beautiful clear complexion free from all ailments of the skin. To all persons troubled with pimples or any other skin diseases I highly recommend Burdock Blood Bitters. I feel quite sure it will cure them."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Dates to Remember.

Dominion Exhibition, St. John, N. B September 5th to 15th, 1910.

Charlottetown Exhibition, September 19th to 23th, 1910.

Charlotte County Agricultural Society's Show, St. Stephen, N. B., September 27th to 30th 1910.

Halifax Exhibition, September 28th to Oct. 6th, 1910.

Yarmouth County Exhibition, Yarmouth, N. S., Sept. 21, 22, 23, 1910.

The Greatest Fruit Show ever held in New Brunswick, St. John, N. B., November, 1910.

Cape Breton County Exhibition, Sydney, N. S., Oct. 12th, 13th and 14th, 1910.

Maritime Winter Fair, Amherst, N. S., December 5--8, 1910.

Full course at the Nova Scotia Agricultural College, Truro, N. S., begins November 1st, 1910.

Short courses at the Nova Scotia Agricultural College begins January 3rd, 1911.

Ladies Short Courses at the Nova Scotia Agricultural College, begins January 4th, 1911.

The NovaScotia Horticultural Society, Windsor, N. S., October 11th, 12th and 13th, 1910.

The Westmorland Poultry and Pet Stock show, Moncton, N. B., February 9th, 10th and 11th, 1911.

N. S. Hort Exhibition at Windsor, N. S,, Oct. 11, 12, 13, 1910.

First Canadian National Apple Show, Vancouver, B. C., October 31st to November 5th.

MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, 14th October, 1910, for the conveyance of His Majesty's Mails, on a proposed Contract for four years 3 times per week each way between Newtown and Sussex from the first of January next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office Newtown, Sussex & route offices and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent
POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, 27th August, 1910.

Your complexion as well as your temper is rendered miserable by a disordered liver. By taking Chamberlain's Stomach and Liver Tablets you can improve both. Sold by all dealers.

hard bread has to be chewed before one can swallow it; therefore, it has won the undeserved reputation of superior wholesomeness. The juices in the saliva digest starches, hence the importance of thorough mastication.

After the dough has risen sufficiently it should be put in an oven that is hot enough to kill the yeast germ quickly, so as to prevent further rising, or souring of bread.

Continued kneading of dough is unnecessary. Some kneading makes the bread of better grain and quality, but as the object of kneading is to redistribute the air bubbles through the dough, as soon as that is accomplished, further work is a waste of energy.

Matching Farm Horses.

Horses on farms are so frequently worked in pairs that it is very necessary that they should be well matched. By this it is not meant that the team should be closely alike in color, size and general appearance. It is desirable that they should be so, but that is only one and by no means the most important part of the matching. It requires a good deal of skill and judgment to bring together a pair of horses that resemble each other in all characteristics sufficiently to work in harmony, and action comes first in this connection. Style is required in the action of any class of horse, and a team, each of which stands up to the bit in about the same way, is attractive to buyers, and pleasing to the man who drives it.

A team ill-matched in regard to action, strength and staying powers is a liberal source of irritation, no matter how nearly alike in color the horses may be. Proper action—that is, strong clean, vigorous movement of feet and legs—is highly desirable, and if it can be combined with general conformation and color, so much the better. Size, to a certain extent, may be sacrificed for strength and conformation, but only within certain limits.—Ex.

How to Whitewash Stables.

The stables should be well whitewashed once or twice during the summer. This can be done conveniently on a rainy day. With an ordinary spray pump a large stable should be whitewashed in a day with one man to pump and another to hold the nozzle. A little crude carbolic acid mixed with the wash, although slightly objectionable, because it gives a slightly yellow tinge to the lime, is a good disinfectant. Sweep down all cobwebs and thoroughly scrape the dirt out of every corner, then spray thoroughly ceilings, walls and floors.

The wash has to be made thinner than when it is to be applied with a brush. Use good lime and strain it into the spray tank, otherwise the nozzle will be clogged by particles of solid matter.

To Change the Atmosphere.

If the odors from cooking are unpleasant in any room of the house, try the following, which has been found to act like a charm.

Put in a bowl-shaped vessel about ten cents' worth of "salts," such as is used in "smelling salts," and cover, either with alcohol or ammonia. Keep this covered when not in use, as the liquid evaporates.

Such a bowl put into a smoking-room or "den" will make the atmosphere breathable by absorbing or destroying the odor of smoke and tobacco. One may cook onions or cabbage without the unpleasantness, and the smoker need not fear to sit in the "best room" and smoke.

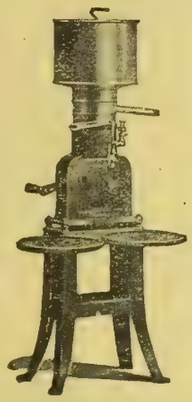
Amsterdam, New York. M. B.

The warmest friends of Red Rose Tea are those who have tried some other brand said to be "as good as Red Rose" and for which they paid the same price. Very easy to say a thing is "as good" but not so easy to "make good." 66

Prices: 30c., 35c., 40c., 50c. and 60c.

THE DOMO SEPARATOR

The Cheapest and the Best.



Prices and Capacities.

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties.
For particulars of Free trial offer write to

J. de L. Tache,
General Canadian Agent, St. Hyacinthe Que.

Agents Wanted all over the Maritime Provinces

FAIR WINNERS

have often been produced by the help of

ABSORBINE

Liniment and Leg Wash, as it strengthens the Muscles and Ligaments. Keeps out soreness, prevents fatigue, stops pain, reduces swellings, soothing to a bruise, antiseptic, healing to a cut or laceration, is, and has been used by most successful exhibitors and trainers, because ABSORBINE does not blister, removes the hair, stain or stop horse from work while removing CAPPED HOCK, SHOE BOIL, SWOLLEN GLANDS, BIG KNEE, BRUISES, THOROUGH-PIN, BOG SPAVIN, WIND PUFF, SPLINT CURB or reducing BOWED TENDON, THICKENED LIGAMENTS OR MUSCLES.

STOPS LAMENESS QUICKLY—KILLS PAIN IN A MINUTE. You will find it a money-maker for you in getting all your HORSES in better shape for regular work or sale, and you might also make a PRIZE-WINNER by removing some blemish from them with ABSORBINE. Price $2.00 a bottle at all druggists, or delivered.

Free descriptive book and lithographed colored picture of "Monk" and "Equity," the champion team of the world, upon request.

W. F. YOUNG, P. D. F. 124 Temple St., Springfield, Mass. or LYMANS, Limited, Agents, St. Paul St., Montreal, Can.

Filling the Floor Cracks.

If you have more money than time putty is a good filling, and it must be beaten until perfectly free from lumps or grains, and quite soft, pressing it well into the cracks and smoothing it even with the surface of the boards. If money is lacking, saw-dust and glue is a good filler, but the cheapest is a good flour paste in which soft old newspaper is soaked, making the mixture quite thick with the paper pulp, pressing it in the cracks with a knife blade and smoothing the top even with the surface. Any of these fillers will dry hard, and may be painted over satisfactorily. For the saw-dust and glue, dissolve one pound of common glue in two gallons of water; when fully dissolved, stir in enough fine sawdust to make a paste; the paste may be colored to match the color of the floor. Finely shredded paper should be soaked in hot flour paste until the pulp is as thick as ordinary putty. Nail holes, and other rough places, cracks, crevices where insects may hide, should be stopped with the filling.

"AUNT SALINA'S WASH DAY PHILOSOPHY"

This little book is chock-full of [illegible] secrets invaluable in the washing of clothes, and should be in every home.

It tells how to wash fancy prints and other fabrics without the use of acids.

It tells how to clean the daintiest lingerie without injury.

It tells how to wash woolen material thoroughly without shrinking it one particle.

It tells how to make hard water soft and save half the soap.

It tells how to remove the drudgery from wash day, and a host of other things that every woman who washes clothes should know.

Send us your name on a postal and we will send you a copy FREE.

CUMMER - DOWSWELL Limited HAMILTON, ONT.

Do it Now.

When you've got a job to do,
Do it now!
If it's one you wish was through,
Do it now!
If you're sure the job's your own,
Don't hem and haw and groan—
Do it now!
Don't put off a bit of work,
Do it now!
It doesn't pay to shirk,
Do it now!
If you want to fill a place,
And be useful to the race,
Just get up and take a brace,
Do it now!
Don't linger by the way,
Do it now!
You'll lose if you delay,
Do it now!
If the other felows wait,
Or postpone until it's late,
You hit up a faster gait—
Do it now!

Clean and Sanitary Dusting.

When people, for the first time, see me cleaning my rooms, they invariably express surprise at my methods of dusting, which unlike the ordinary method, I consider clean and sanitary.

Instead of using the usual sort of duster, I use a damp cloth—preferably some soft stuff, such as a piece of an old gauze undervest or a worn napkin. The cloth is soaked in tepid water, then wrung absolutely dry—so dry that not another drop of water can be wrung from it. With a cloth of this sort the dust is quickly lifted from woodwork and furniture, without being scattered over the floor in the process. When the duster is dirty it is washed out, and again wrung dry.

It is essential that the cloth be wrung perfectly dry as often as it is put in the water; otherwise it will streak the furniture and leave damp surfaces to catch more dust. This method of dusting is employed in hospitals to prevent the dust flying about, to be breathed by the patients, and is the sanitary method of dusting the home as well.

Freeport, Long Island. M. S.

Preserving Measurements.

The young housekeeper venturing on her first preserving may like to know that: Six boxes of strawberries will yield five pint jars of jam; five boxes of currants will yield nine glasses of jelly; six pounds of peaches will yield eight pint jars of preserves; seven pounds of peaches will yield fifteen glasses of marmalade; one peck of quinces will yield twenty-one glasses of jelly; four pounds of plums will yield five pint jars of preserves; four quarts of crab apples measured after cutting small, will yield ten glasses of jelly.

An Arab Saying.

Remember, three things come not back;
The arrow sent upon its track—
It will not swerve; it will not stay
Its speed; it flies to wound or slay.

The spoken words so soon forgot
By thee; but it has perished not;
In other hearts 'tis living still,
And doing work for good or ill.

And the lost opportunity,
That cometh back no more to thee,

Removing Sticky Fly Paper.

I, too, had troubles with sticky fly paper and found that clear alcohol will do wonders to remove it from the children's hair, white waists, silk or wool goods. Use it like water to wash the spots with and you can hardly ever find the place again. I use it as soon as possible after the accident happens as it seems to do the work easier. There is a kind of sticky fly paper made purposely to hang up out of harm's way. Let me know your success with the alcohol.—Lillian.

To Utilize Stale Bread.

Do not throw the scraps of bread into the garbage can or swill barrel. Do not let the scraps mildew. Take stale bread and put in water to soak over night. Mash well next morning, add a little flour, salt, a little sugar, three eggs, a pinch of soda and stir all well together; have your pan well greased, and hot, and with a spoon dipped in water, lilt the stiff batter out by spoonfuls, dropping into the hot pan, and bake immediately in a rather hot oven. This will make excellent biscuits. Or the scraps may be used in batter cakes, or in a dish of tomatoes, or rolled and used on top of meats.

Chocolate Cake.

1 cup sugar, 1 egg, 2 tablespoons cocoa, or 2 squares chocolate grated or melted, ½ cup shortening, ½ cup sour milk, ½ teaspoon soda, 1 teaspton vanilla, 1 cup flour (rounding.) Last, stir in ½ cup boiling water. Bake in moderate oven. Reliable.

A cure for Insomnia.

A excellent cure for insomnia, I found, is to bathe the feet in cold water every night before retiring.

If one awakens during the night, and begins to think, get up and plunge the feet in cold water, dry them, go back to bed, and one will go to sleep like a baby. That was my experience after weeks of insomnia.—G. N. McC., Avalon, Pennsylvania.

The fading of colored articles is due often, not to the washing, but to the ironing. Too hot irons are used directly on the material, and this will more quickly fade delicate colors than any amount of washing. The effect is even worse than strong sunlight. Be sure that the article is evenly dampened and that the iron is only hot enough to smooth the wrinkles properly by firm, even pressure and you will have no more trouble from fading. Skirts must never be ironed across the gores, but up and down; otherwise the fit of the garment is ruined.

Not a minute should be lost when a child shows symptoms of croup. Chamberlain's Cough Remedy given as soon as the child becomes hoarse, or even after the croupy cough appears, will prevent the attack. Sold by all dealers.

The Full Percentage of Cream

Getting the full percentage of cream from milk depends as much upon the oil used to lubricate the separator as upon the separator itself. Gummy oil will cut the fine bearings of your machine, spoil its balance and waste good cream in the skim-milk pail.

STANDARD Hand Separator Oil

never gums, never rusts, never corrodes. It feeds freely into the closest bearings and insures the perfect lubrication that is essential to the free spinning of the bowl and the complete separation of cream from milk. It lessens the driving effort and lengthens the life of your separator.

One gallon cans. All dealers. Or write to

The Imperial Oil Company, Limited

Farm Problems.

How to Destroy Wire Worms.

The way to destroy wire worms is to plow the ground as soon as the grass has been cut. The field should then be kept perfectly clean by cultivating and harrowing it once a week. The second year of this practice will kill every wire worm, it makes no difference how thick they are. If the land is clear of couch grass, one will not need to harrow so often.

One season is not sufficient time to kill the wire worms, as they can exist on the dead roots of the grass; but the second year fixes them all right.

It is worthy of special mention that after spending over $2,000 worth of the hardest kind of labor and then to fail, that after the methods I now follow, it costs me only about $5.00 a year to kill the couch grass, and to clean out the wire worms. I can show my fields today clear of these pests.—Farmer.

Level the Colt's Feet.

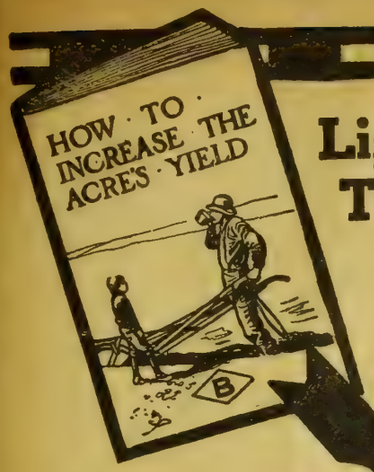
The feet of foals frequently need leveling to prevent an abnormal development of the legs as a result of unequal wear of the hoofs. Many foals stand badly at first and if they are slow in gaining a correct position of the legs the hoofs may become worn in such a way as to prevent a proper standing position or a straight form of action, says Breeders' Gazette. Leveling the feet acts both as prevention and cure. If prevents a breakage, or other cause of rapid wearing away of any part of the hoof, from throwing the weight on the wrong part of the joints. Even if the foal is born with a natural tendency to stand wrong, as with the feet too wide apart or too close together or pigeon-toed, such a tendency may be gradually corrected in large part by keeping the feet level. A colt that stands pigeon-toed, for example, wears off the outside wall of the hoof faster than the inside and the more that condition develops the worse the tendency to stand wrong becomes. By rasping off the inner wall to correspond with or even slightly to exceed the wear of the other side, the foot will be thrown more nearly into line as it strikes the ground. While the leg bones and joints are growing they are susceptible to the persistent pressure from one angle or another and grow toward a correct position or away from it according to the condition of the feet. A level foot induces the colt to assume a correct position of the leg. As an example of the marked effect of the pressure on the joints from shortening one wall or the other of the hoof, work horses with lameness and symptoms of spavin have frequently been made to go sound simply by taking half an inch off of the inner wall of the hoof, thus throwing the concassion onto the outside of the hock joint. If colt's hoofs are kept fairly short at the toes, with the inner and outer walls of equal length, the foot will develop as nearly a correct shape as it can be induced to take and the limbs as well will be safeguarded against deformity. —Maine Farmer.

Sulphur for Sheep.

A sheep keeper writes as follows: I keep at present 100 breeding ewes For the past three years, except when the weather is wet, I have kept before my sheep a mixture of salt and sulphur—one-fifth sulphur and four-fifths salt. This is kept in troughs in the pasture, and in winter in the sheep barns. The result is that I have but little trouble with ticks and have never bothered with stomach worms in the flock. I have used no other medicine.

Weeds a Common Enemy of Production.

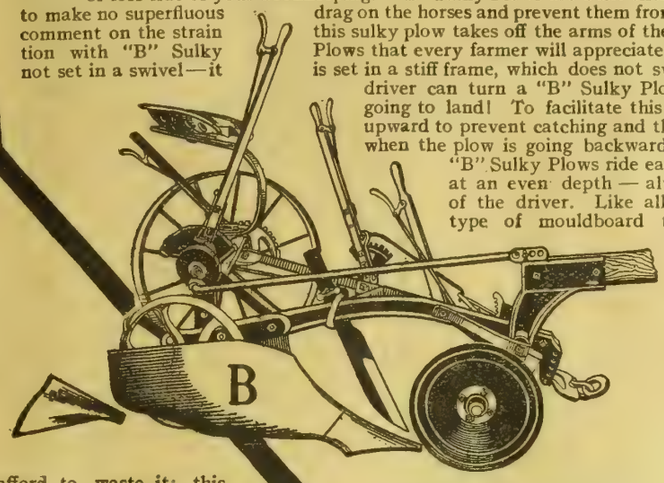
Spraying with sulphate of iron and sulphate of copper, as a means of eradicating weeds, can be said to hardly more than check their growth. The spray destroys wild mustard plants and the leaves of kinghead and Canada thistle if applied before the plants are in bloom, with a machine that will develop one hundred to one hundred and twenty pounds pressure, and through nozzles which make a mist-like spray. Sprinkling with the iron sulphate solution has practically no effect. The sulphates mentioned are inexpensive chemicals. The machinery with which to spray a field



Light Weight Combined With Strength Makes This Plow Stand For Profit On The Farm

WEIGHT and strength are the two essentials in a sulky plow—the strength is needed to stand the wear and tear, of course, and on the weight depends to a large extent whether the plow is to stand on the profit or loss side of your bookkeeping. "B" Sulky Plows are built extra strong for heavy work and still light enough to make no superfluous drag on the horses and prevent them from covering the ground they should in a day. To comment on the strain this sulky plow takes off the arms of the driver is unnecessary. One point in connection with "B" Sulky Plows that every farmer will appreciate is the action of the rear wheel. This wheel is not set in a swivel—it is set in a stiff frame, which does not swing to right or left. The result is that the driver can turn a "B" Sulky Plow around backward—and know where he is going to land! To facilitate this back-up, the rear of the sole is also rounded upward to prevent catching and the colter also tilts automatically on the beam when the plow is going backward. It does not catch in roots and stones.

"B" Sulky Plows ride easily, cut evenly, turn a good furrow, and work at an even depth — always. They are always under full control of the driver. Like all "B" Plows, they are fitted with the exact type of mouldboard to suit the soil where to be used. This mouldboard, of course, is made from soft-centre steel. "B" Sulky Plows enable you to get more work out of your horses without driving them to anything like the exhaustion the ordinary plow demands—even in tough, sticky soils—they will scour anywhere—wet ands have no terrors for "B" Sulky Plows. Why not let a "B" Sulky Plow, backed by the Belanger reputation, save money, time and horseflesh for you—why not buy your plow on the basis that you are going to make it earn enough extra to pay for itself?



This is the light draft "B" Sulky Plow

If your dealer does not sell "B" Plows, write us and we'll tell you where you can see them.

FILL OUT THE COUPON GET THE BOOK FREE

THIS book is an authoritative work on the preparation of the ideal seed-bed,—the foundation of good crops. To buy this book would cost you a dollar, but if you are really interested and will fill out the coupon as an evidence of good faith, we will send you one copy of the complete volume FREE. The story is told in three chapters, — "Soils and Fertilizer," "Plowing and Plows," and "Seeds and Seeding." Each chapter deals with its subject fully, tells the whole story and tells it in such detail that its genuine, practical value to the active farmer is unquestioned.

Your invested capital is your land—your great asset—and you cannot afford to waste it; this book tells you about the most modern methods of conservation — facts which you owe it to yourself to know.

Fill out the coupon—send it to-day—NOW.

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Established since 1867
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FREE $1.00 Book Coupon

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Gentlemen:—

I operate a farm of..... (Number of Acres)

acres of..... (Type of Soil) soil.

Please send me "How to Increase the Acre's Yield," FREE.

Name.....

Address..... Prov.....

4

effectively is somewhat costly. But the effect of spraying is such, if well and properly done, as to cause a material reduction of weed growth and promote a greater growth of grain. It also checks the ripening of seeds to infest the soil the following season. Many menacing weeds are not affected by the spray. Quack grass, wild oats, pigeon grass French weed and sow thistle appear to receive no set back from it. Chemicals that would be effective on them would be injurious to grain.

Cultivation of fields soon after harvest, which may be economically done with a disc harrow, will cause many weed seeds to germinate in the fall to be subsequently destroyed by frost. Weeds thus started may also be plowed under, where they will add to the soil fertility. Fall pasturing has proved destructive to weeds; especially where sheep have been given free range. Quick growing crops, like barley, are valuable in smothering the growth of weeds. Not needing to be sown early, barleaves an opportunity for much dragging and cultivation after weeds have germinated in the spring. The soil thus warmed, the tender weed roots are exposed to the killing effects of atmosphere and sun, the barley germinates and grows more rapidly than the weeds, because most of the weed seeds near the surface have been caused to germinate by the early cultivation and killed by later cultivation. Barley matures earlier than weeds and the systematic farmer may then cultivate his field, give the weeds a chance to germinate to be killed by the winter freezing or fall plowing. Winter rye is also a good crop with which to combat the weeds.—A. D. Wilson, Superintendent Extension Division and Farmers' Institutes, University Farm, Minn.

Paris Green on the Cabbage Plnt.

A Shippensburg man who has been using paris green to kill the worms that have appeared on the heads of cabbage in his garden wrote to Prof. H. A. Surface, Pennsylvania state zoologist, asking whether the poison will render the cabbage unfit for use. The professor answered the letter as follows:

"It will not render cabbage unfit for use to apply paris green to it. You can use one-half pound of paris green to fifty gallons of water sprayed on cabbage, and it will kill the worms and not injure the cabbage for food. Apply some soap to it to make it stick. Also, you can use two pounds of arsenate of lead in place of paris green. This will stick better and I much prefer it.

I have heard that from one-half ounce to one ounce of alum dissolved in each gallon of water will destroy the cabbage worm. I have not have opportunity to try it in my experimental work, but hope to do so soon. I would recommend that you try it and report to me results. I can assure you that practically all truck growers now use arsenical poison on cabbage and are satisfied with the results, as it kills the worms, although, of course, it does not kill plant lice, and it is not recommended for this. For aphids or plant lice I recommend one pound of Whale oil soap in five gallons of water.

Cabbage heads grow from within outward, thus they are constantly throwing out or spreading the leaves to which the poison has been applied. If it headed by throwing the outer leaves inward there would be greater danger of poisoning."

Apple Grading at Hood River.

J. L. Hills, in the seventh annual report of the Vermont Agricultural Association, says that one of the most interesting and significant features of Hood River apple growing is the grading of the fruit by Hood River Fruit Growers' Union. This is not a union in the opprobrious sense of the term. There is no compulsion. Some of the apple growers do not belong to it; but over 90 per cent. of the orchardists hold membership.

The rules of this organization are very strict in certain matters and particularly so as to the grading. Each orchardist picks his own apples, but the moment they have been passed from the tree into the pick-basket, or from the basket or pail to the storage house, he ceases to exercise control over them. They go then into charge of the agents of the union.

John Smith grows his apples, but John Smith has absolutely no more to do with the grading of his own property than has the King of the Cannibal Islands. If he presumes in any way to criticise the grading of the union's agents, the presumption is against him and not against the grader. In other words, his complaints are stopped immediately and automatically.

Moreover, the grading, being the work of disinterested experts, is done in a uniform manner. There is no temptation to defraud the ultimate consumer, as is so notoriously common in the packing of eastern apples. Furthermore, in grading and packing, marks are placed upon the lots or boxes indicating by letter, number or some cabalistic sign what individual did the work.

The union employs traveling agents who appear unexpectedly and who check up the grades and packs. If, by any chance, this traveling representative find graders unduly favoring any individual, or doing ought but exact justice, they are warned once and discharged on a second offense. Every effort is made in this way to secure uniform grading and to remove the temptation to sell an inferior product at the price of superior wares.

This system has resulted, so far as grading and packing is concerned in such absolute uniformity and such complete standardization, that it is customary now to sell carloads of Hood River apples in transit and on the statement of the grade as offered by the union. Large lots pass from hand to hand in sales without a single box being opened, and with complete assurance as to the grade being up to the guaranty.

Wash Your Clothes In The Easy Way

Wash them in the "Puritan" way. No rubbing—no tired arms—no aching back—no scalded hands and face. Fill The "Puritan" with warm, soapy water—put in the soiled clothes—start the "Puritan" going—and in five minutes, the clothes are ready to hang.

That's the "Puritan" way—the easy way to wash clothes. Make it your way.

Churn your Butter in the easy way with a "Favorite" Churn. 69

Write us if your dealer cannot supply the "Puritan" Washer and "Favorite" Churn. We will see that you are promptly supplied.

DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

A Windsor Lady's Appeal.

To All Women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painfull or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H 309, Windsor, Ont.

MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 7th October, 1910, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, one and three times per week each way, between Donegal, Waterford and Sussex, from the 1st of January next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Donegal, Waterford, Sussex and route offices and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, 22nd August, 1910.

MUMFORD BROS.

PRODUCE COMMISSION MERCHANTS

MUMFORD'S BUILDING, ARGYLE ST.,

Halifax, N. S.

Personal attention given to sales of Butter Eggs Hogs Beef, Poultry, Fruit, Vegetables etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application TELEPHONE 1905

Perfection Ideal Band It is the best band on the market. There are no sharp corners to chafe the fowl. They are cut clean and smooth. The workmanship is the best that there is on any Band made today. 12 for 12c, 25 for 20c, 50 for 40c, 100 for 65c. State breed bands are for. Sample and catalogue for stamp. GEO. H. SEAMAN, Moncton, N. B.

Your old Carpets will make you handsome Rugs. Write for booklet, mailed free.—The MARITIME RUG WORKS, St. John, N. B.

FLORICULTURE.

A. R., of St. John., writes: "I am taking advantage of your notes to ask for directions as to proper method of growing Frusias in the house. I have some to plant and would like a few later ones. How can they be obtained?"

Fruesia bulbs can be obtained in September and should be planted as soon as possible. They do not require to be placed in the dark as do the Dutch bulbs but may be grown in any fairly cool, light window. When the grass-like leaves are about an inch high they should be tied to short wire to support the bulbs, which are very heavy in proportion to the size of the stalks. If particularly fine blooms are required, a little liquid manure, as soon as buds appear, will be of great assistance. To, have later blooms, keep a few bulbs out of the soil for a few weeks in a cool dry place.

Wash your palm occasionally with Castile soap and keep the leaves fresh and green. "Cleanliness is next to godliness," applies quite as much to plants as to humans.

Speaking of insects on palms, the writer's attention was recently called to the mealy bug on a plant that was alone in a room and had not been out of it for months. The only possible chance of them becoming infested with this pest was the placing a vase of chrysanthums close to it during one night. This is indeed the only practical solution of the mystery and should be a warning not to place cut blooms close to growing plants.

There is no better blooming plant than the Primrose; the Chinese varieties are now coming to their blooming period and are without doubt the most satisfactory house Primrose as they like cool rooms, partial shade, moisture and no water in saucer. They are very easily grown, if the drainage is good and no water gets into the crown of the plant. Water should only be applied to the edge of the soil next the pot, never slopped over the leaves and crown of the plant. Beautiful shades of lavender can be obtained in this family as well as the old reds and pinks and white.

Don't neglect to cover all hardy plants, shrubs and vines. Cover Boston Ivies with brush, as high up as you can, and give them a good mulch of manure. The Crimson Rambler and Dorothy Perkins improve so much with this treatment they are such good bloomers.

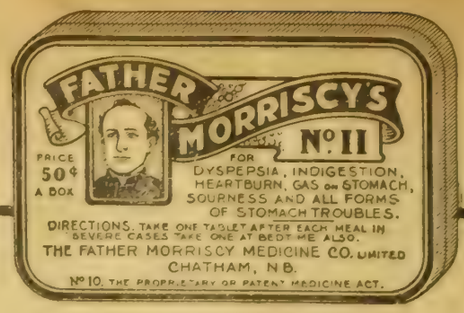
In planting bulbs or perennial plants, carefully remove any vegetable matter, that would decay quickly, such as the dead leaves of weeds, from their immediate vicinity. Unless this is done, the bulbs and roots are also likely to be affected.

Do not cut tops of Peonies unless you are transplanting them, their own leaves are a splendid aid to wintering.

Don't prune roses in fall, spring is the better time.

A. N., St. John, writes: "My palm is growing nicely but the leaves are very short stemmed. It has a good, light window with even temperature and good care. The plant seems to be perfectly healthy, the only trouble is that of short stems. What is the cause of this and what can be done to correct it?"

Palms that have been grown in a crowded greenhouse are drawn up naturally, as the close proximity of their neighbors prevent a short latural growth; the light is also from the top but when taken into a house when they have plenty of room to spread, with side light instead of top light, they have no need of growing so high and so spread their fans with much shorter stems. A good rich soil with more light will overcome the difficulty.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No II
PRICE 50¢ A BOX
FOR DYSPEPSIA, INDIGESTION, HEARTBURN, GAS on STOMACH, SOURNESS AND ALL FORMS OF STOMACH TROUBLES.
DIRECTIONS. TAKE ONE TABLET AFTER EACH MEAL IN SEVERE CASES TAKE ONE AT BED TIME ALSO.
THE FATHER MORRISCY MEDICINE CO. LIMITED
CHATHAM, N.B.
No 10. THE PROPRIETARY OR PATENT MEDICINE ACT.

Each tablet of Father Morriscy's "No. 11" Prescription will digest 1¾ pounds of food. This means that though you are a martyr to Indigestion or Dyspepsia, you can eat a good meal **and digest it, too,** if you take a "No. 11" tablet afterward.

With the aid of Father Morriscy's "No. 11" sick, sour, dyspeptic stomachs quickly recover.

50c. a box at your dealer's or from

Father Morriscy Medicine Co. Ltd, Chatham, N.B.

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REMEMBER THAT

MOLASSINE MEAL

Is an APPETISER, a DIGESTER and a proved WORM ERADICATOR.

A FOOD FOR

Horses, Cattle, Sheep, Pigs and Poultry.

IMPORTED BY

ANDREW WATSON, 90 Youville Square, MONTREAL, - QUE.

Telegraphy A Profession with a Demand Far in Excess of the Supply.

This demand is caused by the enormous amount of railroad building going on in Canada and yet Canada is only just beginning to build her railroads. To those who are ambitious telegraphy offers a brilliant future.

Hundreds of new Telegraph offices will be opened on the **Grand Trunk Pacific** next summer.

Railroad Telegraphy as a Young Man's Opportunity.

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NET PROFITS.

At the end of the year are greatly increased when you use a **"LONDON"** gas or gasoline engine.

Runs day or night, winter or summer.

On the lightest kind of work saves one man's wages.

Send for Catalogue 18G, gives particulars.

London Gas Power Co., Limited, London, Canada

Formerly Scott Machine Co., Limited.

Don't waste your money buying plasters when you can get a bottle of Chamberlain's Liniment for twenty-five cents. A piece of flannel dampened in this liniment is superior to any plaster for lame back, pains in the side and chest, and much cheaper. Sold by all dealers.

Dominion Exhibition.

(Continued from page 734.)

in regard to popularity in Canada, as well as in the United States. Exhibitors in this department came from far away Ont., Quebec and P. E. Island, and Nova Scotia, were well represented by leading breeders, but naturally the great bulk belonged to New Brunswick.

The Asiatic class was better represented at this show than it has been for years. Many magnificent specimens of Light and Dark Brahmas were shown as well as Cochins and Langshans.

In the American class great interest was taken in the Barred Plymouth Rocks. The winners were a strong class, despite the fact that most all the old birds were in moult and a bit rough. The young classes had some well developed birds of good merit and the winners were an attractive lot.

Most of the Wyandotte families were well represented. The Whites far out-classed the rest. It is doubtful if ever better White Wyndottes were shown at a fall show in Eastern Canada. First hen, cockerel and pullet are wortby of special mention for quality and condition.

The Rhade Island Reds was the largest class in the whole show, which speaks their great popularity. Competition was red hot and no winner had a "cinch."

Leghorns were out in force and the contest was keen in both whites and browns with quality to burn.

Some grand old Minorcas were shown. While the young stock was good they were not hatched as early as usual.

Spanish and Andalusians had many entries and made a nice show. English breeds were out stronger than ever. Orpingtons, Dorkings and Red Caps made a big feature in their classes. Never before in the Maritime Provinces, was there such a show of all the Polish varieties.

Mr. J. H. Warrington, Cornwall, Ontario, came down with a car load of the "strictly fancy" stuff and along with his genial self were a whole show in themselves. He is a good fellow to meet and will be always welcome. For want of space it will be impossible to tell of the Hamburgs, French Breeds, Games, and Ornamental birds. There were Bantams by the hundreds. They all made a most pleasing and interesting display and lent variety to the show.

Geese, Ducks and Turkeys were out in goodly numbers and showed plenty of class.

Mr. W. A. Jack was superintendent and had a good corps of attendants and gave good care and attention to both exhibits and exhibitors.

Mr. A. C. Smith placed the awards with his usual care and ability. His work gave general satisfaction, except in a few sections where a mistake might easily be made in so many classes. The poultry show on a whole was a great success.

DAIRY PRODUCTS.

The dairy products class was far from being satisfactory. New Brunswick cheese was conspicuous by its absence. Prince Edward Island made a good showing in the cheese section. Butter, in its various form of packages was not as attractive as it might be.

L. C. Daigle, Dairy Superintendent, had charge of this department. The butter making competition was not well patronized by makers; but the few who did take part, made matters interesting for the visitors who watched them at their work.

A showing of particular interest was the "Made in St. John" exhibit in the Agricultural Hall. Many visitors, and city people, too, were heard remarking that they did not know so many different kinds of goods were manufactured in St. John. St. John did well in this respect and the showing was a good advertisement for the manufacturers.

The Dominion Exhibition for 1910 is over and the various exhibitors have either returned to their respective homes or have hied off to other fairs, where they will meet new competitors and win fresh laurels.

Dominion Exhibition Prize List.

Horses.

THOROUGHBRED HORSES.

Stallion, 4 yesrs and upwards—1 George W. Fowler, Sussex, N. B.; 3, Canadian National Bureau of Breeding, Montreal.

Filly, yearling—1, A. A. Laflin, St. Stephen, N. B.

Mare, 4 yrs. and upwards—1, Norman McLeod, St. John West, N. B.; 2, A. A. Laflin.

Brood Mare with foal—Hartland Poultry Yards, Hartland, N. B.

Foal of 1910—Hartland Poultry Yards.

STANDARD BRED HORSES.

Stallion 4 yrs. and upward—1, W. J. Alexander, St. John; 2, R. A. Snowball, Chatham, N. B.; 3, Alex. Clark, St. John.

Filly, 2 yrs. old—1, H. R. McMonagle, Sussex Corner, N. B.; 2, S. T. Lamb, Perry Point, N. B.

Yearling Filly—1, H. R. McMonagle; 2, S. T. Lamb.

Mare, 4 yrs. and upwards in harness—1 and 2, H. R. McMonagle.

Brood Mare with foal—1, Alex. Clark.

Foal of 1910—1, Alex. Clark.

HACKNEYS.

Stallion, 4 yrs. and upwards—1, T. B. McAuley, Hudson Heights, Que.

Stallion, 3 yrs. old—1, R. W. Snowball, Chatham.

Stallion, one yr. old—1, R. A. Snowball; 2, T. B. McAulay.

Stallion, any age—1, T. B. McAulay.

Yearling Filly—1, R. A. Snowball; 2, T. B. McAulay.

Brood Mare with foal—1, R. A. Snowball; 2 and 3, T. B. McAulay.

Foals of 1910—1 and 3, T. B. McAulay; 2, R. A. Snowball.

Special prize offered by Canadian Horse Society.

Best Stallion, any age or height, shown on line—1, T. B. McAulay.

Best Mare, any age, shown on line—T. B. McAulay.

CARRIAGE AND COACH HORSES.

Stallion, 4 yrs. old and uuwards—1, W. J. Alexander; 2, H. C. Jewett, Fredericton; 3, W. H. Keys, St. Stephen, N. B.

Stallion, 2 yrs. old—1, Hugh Payne, Hillsdale, N. B.

Stallion, any age—W. J. Alexander.

Gelding, 3 yrs. and upwards— John Wood, St. John.

Brood Mare with foal—R. T. Haines, Bartibogue, N. B.

Foal of 1910—R. T. Haines.

Single Carriage Horse, over 15½ hands in harness—1, DeB. Carritte, St. John.

Best Carriage Horse in New Brunswick, Silver Cup doanted by Geo. McAvity, St. John—1, DeB. Carritte.

ROADSTER HORSES.

Brood Mare with foal—1, Orin Hayes, Sussex, N. B.

Foal of 1910—Orin Hayes.

Mare, 3 yrs. and under—1, John F. Frost, Hampton, N. B.

CLYDESDALES.

Stallion, 4 yrs. and upward—1, T. B. McAulay; 2, H. C. Jewett, Fredericton; 3, Logan Bros, Amherst Point, N. S.

Stallion, 3 yrs. old—1, R. A. Snowball; 2, Meadwell Hoben, Maugerville, N. B.; 3, H. R. McMonagle.

Stallion, 2 yrs. old—1, H. C. Jewett.

Stallion, 1 yr. old—1, Logan Bros.

Filly, 3 yrs. old—1, John Barton, Welsford, N. B.

Filly, 2 yrs. old—1 and 2, Logan Bros; 3, C. P. Elanchard, Truro, N. S.

Filly, 1 yr. old—1, Logan Bros.

Brood Mare with foal—1 and 3, R. A. Snowball; 2, Logan Bros.

Foal of 1910—1 and 3, Logan Bros.; 2, R. A. Snowball.

Clyde Mare, any age—1, R. A. Snowball; 2 and 3, Logan Bros.

Pair Clyde Mares—1, R. A. Snowball; 2, Logan Bros.

Special Prizes offered by the Clydesdale Association of Canada.

Best Clydesdale Stallion, any age—1, T. B. McAulay.

Best Clydesdale Female, any age—1, R. A. Snowball

Best Clydesdale Stallion, bred in Canada—1, R. A. Snowball.

Best Clydesdale Female bred in Canada—1, Logan Bros.

Best team, mares or geldings, sired by stallion registered in Clyde records—1, R. A. Snowball.

Special Gold Medals by Clydesdale Horse Society of Great Rritain and Ireland.

For best Clyde Stallion—T. B. McAulay.

For Best Mare or Filly—1, R. A. Snowball.

PERCHERONS.

Stallion, 4 yrs. old and upwards—1, Mathurin Horse Co., St. John; 2, Jamieson & Walker, Sussex Corner; 3, D. W. McKenzie, Nerepis Station, N. B.

Stallion, 1 yr. old—1, Chas Symes, Minudie, N. S.

Stallion, any age—1, Mathurin Horse Co.

Filly, 3 years old and upward1— Chas.s.Symes.

Foal of 1910—1, Geo. F. Mayes, St. John; 2, Geo. A. Chamberlain.

DRAUGHT HORSES.

Best Draught Gelding or Mare, any age or weight—1, J. Pender & Co., St. John.

GENERAL PURPOSE.

Single Horse, gelding or mare—1, James Barrett & Sons; 2, Dave Love, St. John; 3, J. McDonald, Jr., Woodside.

Bank of N. B. Special Cup—James Barrett & Sons.

PONIES.

Pny in harness, 12½ hands and under—1, Miss Constance White, St. John; 2, Arthur Schofield, Hampton.

Pony in harness, 12½ to 14 hands—1, W J. Alexander.

HARNESS HORSES.

Single Roadster, trotter, gelding or mare, 15.3 hands and under—1, S. S. Wetmore, Clifton, N. B.

Single Pacer, gelding or mare—1, P. H. Nugent, St. Martins, N. B.; 2, John Buckley, Rogerville, N. B.

SPECIAL HEAVY HARNESS CLASS CARRIAGE HORSES. 6

Single Horse, 16 hands or over—P. H. Nugent.

Single Horse, 15.2 hands and under 16 hands—1, H. C. Jewett.

Single Horse, 15 hands and under 15.2 —1, T. B. McAulay; 2, DeB. Carritte.

Pair Horses 15.2 hands and under 16—1, T. B. McAulay.

Progeny of Government imported horses—1, A. A. Laflin; 2, Norman MacLeod; 3, Hartland Poultry Yards.

SADDLE HORSE

Ladies' Saddle Horse, over 14,2, ridden by a lady, 1, S. S.Wetmore.

COMMERCIAL.

Single delivery horse, for bakers. confectioners, etc , 1, I. B. Taylor, 2, F. E. Wilkins.

Silgle Horse heavy express general delivery. 1, J. E, Pender & Co.; 2 and 3, Dominion Express.

Beef Cattle.

SHORTHORNS.

Bull, 3 yrs. old and upwards—1, C. A. Archibald, Truro, N. S.

Bull, senior, yearling—1, R. A. Snowball.

Bull, senior calf—1, R. A. Snowball; 2 and 3, C. A. Archibald.

Bull, junior calf—1, C. A. Archibald.

Senior Champion male—1, C. A. Archibald.

Junior Champion Male—R. A. Snowball.

Junior Reserve Champion Male— R. A. Snowball.

Grand Champion Male—C. A. Archibald.

Grand Reserve Champion Male—R. A. Snowball.

Cow, 4 yrs old and upward—1, 2, 4, C. A. Archibald; 3, R. A. Snowball.

Cow, 3 yrs. old—1, 2 and 3, C. A. Archibald; 4,R. A. Snowball.

Cow or Heifer, 2 yrs old—C. A. Archibald.

Heifer, senior, yearling—1, C. A. Archibald; 2 and 3, R. A. Snowball.

Heifer junior yearling—1 and 2, C. A. Archibald.

Heifer, senior calf—1 and 2, R. A. Snowball.

Heifer, junior calf—1 and 2, C. A. Archibald.

Senior Champion Female—C. A. Archibald.

Senior Reserve Champion Female—C. A Archibald.

Junior Champion Female—C. A. Archibald.

Junior Reserve Champion Female—C. A. Archibald.

Grand Champion Female—C. A. Archibald.

Grand Reserve Champion Female— C. A. Archibald.

Breeders' Aged Herd—1, C. A. Archibald.

BIeeders' Young Herd—1, C. A. Archibald; 2, R. A. Snowball.

Bull and 3 of his het—1, C. A. Archibald; 2, R. A. Snowball.

Cow, and 2 of her offspring—1 and 3, C. A. Archibald; 2, R. A. Snowball.

SPECIALS.

Best Bull, any age—1, C. A. Archibald; 2, R. A. Snowball.

Best Female, any age—1 and 2, C. A. Archibald.

Herd, bull and 4 females—1 and 2, C. A. Archibald.

Bull and 3 of his get—1, C. A. Archibald; 2, R. A. Snowball.

Best Shorthorn Bull in the Maritime Provinces, Silver Cup—C. A. Archibald.

HEREFORDS.

In this class, every prize went to W. W. Black Amherst, N, S., with the exception of third prize on aged cow, which went to Wm. Robinson Amherst, N. S.

BEEF GRADES.

Cow, 4 yrs. and upwards—1, W. W. Black; 2, Wm. Robertson.

Cow, 3 yrs. old—1, W. W. Black.

Cow or Heifer, 2 yrs. old—1, W. W. Black.

Heifer, 1 yr. old—1, W. W. Black.

Heifer Calf—1, W. W. Black.

FAT CATTLE.

Fat Ox or Steer, 2 yrs. and over—1 and 2, W. W. Black; 3, W. Robertson; 4 J. McDonald, Jr., Woodside, N. B.

Fat Steer under 2 years—1 and 3, W. W. Black; 2, Wm. Robertson.

Fat Cow or Heifer, 2 yrs. old and over—1 and 3, W. W. Black; 2, Wm. Robertson.

Fat Heifer or Cow under 2 yrs.—1 and 3, W. W. Black; 2, Wm. Robertson.

Pair of Fat Cattle, any age—1, W. W. Black; 2, J. McDonald, Jr.

Dairy Cattle.

AYRSHIRES.

Bull, 3 yrs. old and upwards—1, P. D. McArthur, North Georgetown, Que.; 2, M. H. Parlee, Lower Millstream; 3, Mc-

Attention!

Sportsmen, Lumbermen, Teamsters and all Out Door Workmen!

We have purchased **50 Hudson Bay Sample Coats,** and you may have them, while they last, at **Cost Prices.**

Brown Duck Coats, rubber lined..... **$1.35, 1.60. 2.25, 2.50**

Corduroy Coats, heavy wool lining..... **$3.00 and 4.50**

Sheep Skin Lined Coats, Duck Corduroy and Tweed outside, **$4.25, 5.00, 6.00, 6.25**

Leather Coats..... **$5.50, 6.00 and 6.50**

If Interested, Write at Once.

These Prices mean a saving of from 50c to $2.00 per Coat.

C. B. PIDGEON, Cor. Main and Bridge Streets, **St. John, N. B.**

Intyre Bros., Sussex Corner; 4, C. P. Blanchard, Truro.

Bull, 2 yrs. old—1, Jas. Barrett & Sons, Couchville, N. B.

Bull, senior yearling—1, McIntyre Bros.

Bull, junior yearling—1, McIntyre Bros.; 2, M. H. Parlee.

Bull, senior calf—1, P. D. McArthur; 2, McIntyre Bros.; 3, Retson Bros., Truro; 4, Jas. Barrett & Sons.

THE FISH BRAND SLICKER

IS

famous for its sureness of doing its day's work—and that day's work is to keep you dry and comfortable when it rains.

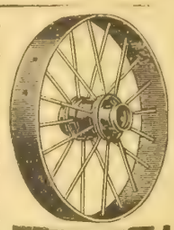
SOLD EVERYWHERE

BE SURE THE GARMENT YOU BUY BEARS "THE SIGN OF THE FISH" TOWER'S FISH BRAND

TOWER CANADIAN CO., LTD. 110

TORONTO, CANADA.

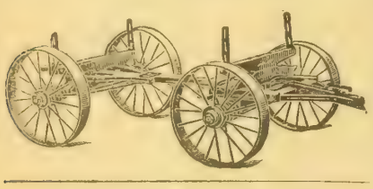
The One Wheel—The One Wagon



Dominion Low Wide-tire Steel Wheels are made on principle of bicycle wheels. Unlike wooden and other wheels, the Dominion distributes strain equally. Dominion Low Wide-tire Steel Wheels are stronger, lighter and cheaper than wooden wheels. Have staggered spokes. So unlike wooden wheels, they will not rot or easily break. Dominion wheels will carry all horses can draw. Wide tires save roads and horses, and reduce loading labor and time. Can be taken apart and repaired, if necessary. Guaranteed not to break in even coldest weather or on rockiest roads.

Our Handy Wagon saves you so much labor and time that it pays for itself the first year. Yet it will last a lifetime. It makes loading and unloading easier. Its wide-tire steel wheels save roads and horses' strength. Strong enough to carry all horses can pull. Made of finest material; best workmanship; neat appearance. Write for free catalogue on Handy Wagon and Steel Wheels.

Dominion Wrought Iron Wheel Co., Ltd., Orillia, Ont.



SEALED TENDERS addressed to the undersigned and endorsed "Tender for Extension to Breakwater, Richibucto Cape, N. B.," will be received at this office until 4.00 P. M., on Wednesday, October 5 1910, for the construction of an extension to breakwater at Richibucto, Kent County, N. B.

Plans, specification and form of contract can be seen and forms of tender obtained at this Department, at the offices of E. T. P. Shewen, Esq., District Engineer, St. John, N. B.; Geoffrey Stead, Esq., District Engineer, Chatham, N. B., and on application to the Postmaster at Richibucto, N. B.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures, stating their occupations and places of residence. In the case of firms the actual signature, the nature of the occupation and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, for the sum of two thousand three hundred ($2,300.00) dollars, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By order,

R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, September 12, 1910.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.

Bull, junior calf—1 and 2, McIntyre Bros.; 3, P. D. McArthur; 4, M. H. Parlee.

Senior Champion male—P. D. McArthur.

Senior Reserve Champion Male—M. H. Parlee.

Junior Champion Male—McIntyre Bros.

Junior Reserve Champion Male—M. H. Parlee.

Grand Champion Male—P. D. McArthur.

Grand Reserve Champion Male—McIntyre Bros.

Cow, 4 yrs. old and upwards—1, M. H. Parlee; 2 and 4, McIntyre Bros.; 3, S. Creighton.

Dry Cow, 4 yrs. old and upwards—1, P. D. McArthur; 2, McIntyre Bros.; 3, M. H. Parlee.

Cow, 3 yrs. old—1, C. P. Blanchard; 2, Jas. Barrett & Sons; 3, P. D. McArthur; 4, Retson Bros.

Dry Cow, 3 yrs. old—1, C. P. Blanchard; 2, Jas. Barrett & Sons; 3, McIntyre Bros.

Canadian bred cow, 3 yrs. old and upwards—1, M. H. Parlee; 2, Jas. Barrett & Sons; 3, S. Creighton, Silver Falls, N. B.

Cow, 2 yrs. old—1 and 4, P. D. McArthur; 2, Retson Bros; 3, Chas. ymes, Minudie.

Heifer, 2 yrs. old—1, 3 and 4, McIntyre Bros.; 2, P. D. McArthur.

Heifer, senior yearling—1, P. D. McArthur; 2, C. P. Blanchard; 3, Retson Bros.; 4, S. Creighton.

Heifer, junior yearling—1, McIntyre Bros.; 2, Jas. Barrett & Sons; 3, M. H. Parlee; 4, Retson Bros.

Heifer, senior calf—1, McIntyre Bros.; 2, Jas. Barrett & Sons; 3, M. H. Parlee; 4, P. D. McArthur.

Heifer, junior calf—1 and 2, McIntyre Bros.; 3, P. D. McArthur; 4, S. Creighton.

Senior Champion Female—M. H. Parlee.

Senior Reserve Champion Female—McIntyre Bros.

Junior Champion Female—P. D. McArthur.

Junior Reserve Champion Female—C. P. Blanchard.

Grand Champion Female—M. H. Parlee.

Grand Reserve Champion Female—P. D. McArthur.

Aged Herd—1, McIntyre Bros.; 2, P. D. McArthur; 3, M. H. Parlee.

Breeders' Young Herd—1, McIntyre Bros.; 2, M. H. Parlee; 3, Jas Barrett; 4, Retson Bros.

Bull and 3 of his get—1, P. D. McArthur; 2, McIntyre Bros.; 3, M. H. Parlee.

Cow and 2 of her offsprings—1, P. D. McArthur; 2, M. H. Parlee; 3, McIntyre Bros.

JERSEYS.

Bull, 3 yrs. old and upwards—1, B. H. Bull & Sons, Brampton, Ont.; 2 and 3, H. S. Pipes & Son, Amherst; 4, Josselyn & Young, Silver Falls, 5, S. Creighton.

Bull, 2 yrs. old—1, B. H. Bull & Sons; 2 and 3, Robert Robinson, Sussex.

Bull, senior yearling—1, B. H. Bull & Sons; 2, J. E. Baker & Sons, Barronfield; Robert Robinson; 4, H. S. Pipes & Sons.

Bull, junior yearling—1, B. H. Bull & Sons.

Bull, senior, calf—1 and 3, H. S. Pipes & Sons; 2, B. H. Bull & Sons; 4, R. Robinson.

Bull, junior calf—1, H. S. Pipes & Son; 2, B. H. Bull & Sons; 3, R. Robinson.

Senior Champion Male—B. H. Bull & Sons.

Senior Reserve Champion Male—B. H. Bull & Sons.

Junior Champion Male—B. H. Bull & Sons.

Junior Reserve Champion Male—H. S. Pipes & Sons.

Grand Champion Male—B. H. Bull & Sons.

Grand Reserve Champion Male—B. H. Bull & Sons.

Cow 4 yrs. old and upwards— 1 and 4, B. H. Bull & Sons; 2, Josselyn & Young; 3, R. Robinson.

Dry Cow, 4 yrs. old and upwards—1, B. H. Bull & Sons; 2, Josselyn & Young; 3, H. S. Pipes & Sons.

Cow, 3 yrs. old—1 and 2, Josselyn & Young; 3, B. H. Bull & Sons.

Dry Cow, 3 yrs. old—1, Robert Robinson; 2, Josselyn & Young; 3, B. H. Bull & Sons.

Canadian Cow, 3 yrs. old and upward—1, Josselyn & Young; 2, Robert Robinsoninson; 3, B. H. Bull & Sons.

Cow, 2 yrs. old—1, H. S. Pipes & Sons; 2, B. H. Bull & Sons; 3, Josselyn & Young; 4, Jas. E. Baker & Sons.

Heifer, 2 yrs. old—1, B. H. Bull & Sons; 2 and 3, Josselyn & Young; 4, H. S. Pipes & Sons.

Heifer senior yearling—1, B. H. Bull & Sons; 2, H. S. Pipes & Sons; 3, Robt Robinson; 4, Wm. Mullin, St. John.

Heifer, junior yearling—1, Josselyn & Young; 2, B. H. Bull & Sons; 3, H. S. Pipes & Sons; 4, Robert Robinson.

Heifer senior calf—1, B. H. Bull & Sons; 2 and 3, H. S. Pipes & Sons; 4, Robert Robinson.

Heifer junior calf—1, B. H. Bull & Sons; 2 and 4, H. S. Pipes & Sons; 3, Robert Robinson.

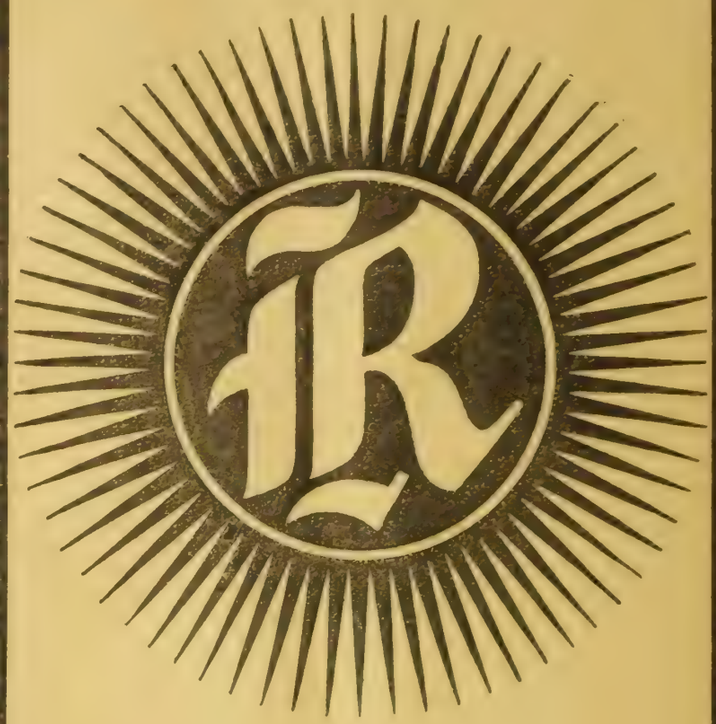
Senior Champion Female—B. H. Bull & Sons.

Senior Reserve Champion Female—H. S. Pipes & Sons.

REA'S SPECIAL

FALL BARGAIN CATALOGUE

IS NOW READY FOR YOU



WRITE FOR IT TODAY; IT IS FREE.

A. E. REA & CO. MONTREAL LIMITED.

DEPARTMENT No. 9

MONTREAL.

Junior Champion Female—B. H. Bull & Sons.

Junior Reserve Champion Female—B. H. Bull & Sons.

Grand Champion Female—B. H. Bull & Sons

Grand Reserve Champion Female—H. S. Pipes & Sons.

Aged Herd—1, B. H. Bull & Sons; 2, Josselyn & Young; 3, H. S. Pipes & Sons.

Breeders' Young Herd—1, B. H. Bull & Sons; 2 and 3, H. S. Pipes & Sons.

Bull and 3 of his get—1, H. S. Pipes & Sons; 2, B. H. Bull & Sons; 3, Josselyn & Young.

Cow, and 2 of her offspring—1, Josselyn & Young; 2, Robert Robinson; 3, H. S. Pipes & Son.

GUERNSEYS.

Bull, 3 yrs. old and upwards—1, Roper Bros., Charlottetown, P. E. I.

Bull, 2 yrs. old—1, Jas. Roper & Sons Charlottetown.

Bull, junior yearling—1, Roper Bros.; 2, Jas. Roper & Sons.

Bull, senior calf—1, Jas. Roper & Sons; 2, Roper Bros.

Bull, junior calf—1, Jas. Roper & Sons; 2, Roper Bros.

Bull, senior champion—Diploma and Silver Medal, Roper Bros.

Bull, Senior Reserve Champion—Diploma, Jas. Roper & Sons.

Bull, junior champion—Diploma and Silver Medal, Roper Bros.

Bull, junior reserve champion— Diploma, Jas. Roper & Sons.

Bull, Grand Champion—Diploma and Silver Medal, Roper Bros.

Bull, Reserve Grand Champion— Diploma and Bronze Medal, Roper Bros.

Cow, 4 yrs. old and upwards—1, Roper Bros.; 2, Jas. Roper & Sons.

Dry Cow, 4 yrs. old and upwards—1, Roper Bros.; 2, Jas. Roper & Sons.

Cow, 3 yrs. old—1, Roper Bros.; 2, Jas. Roper & Sons.

Dry Cow, 3 yrs. old—1, Roper Bros.; 2, Jas. Roper & Sons.

Cow, 2 yrs. old—1, Roper Bros.; 2, Jas. Roper & Sons.

Heifer, 2 yrs. old— 1, Roper Bros.

Heifer, senior yearling—1, Roper Bros.; 2, Jas. Roper & Sons.

Heifer junior yearling—1, Jas. Roper; 2, Roper Bros.

Heifer, senior calf—I, Roper Bros.; 2, Jas. Roper & Sons.

Senior Champion Female—Diploma and Silver Medal—Roper Bros.

Senior Reserve Champion Female—Diploma, Roper Bros.

Junior Champion Female—Diploma and Silver Medal, Roper Bros.

Junior Reserve Champion Female—Diploma, Roper Bros.

Grand Reserve Champion Female—Diploma and Bronze Medal, Roper Bros.

Grand Champion Female—Diploma and Silver Medal, Roper Bros.

Aged Herd—1, Roper Bros.; 2, James Roper & Sons.

Breeders' Young Herd—1, Roper Bros.; 2, Jas. Roper & Sons.

Bull and 3 of his get—1, Roper Bros.

Cow, and 2 of her progeny—1, Roper Bros.; 2, Jas. Roper & Sons.

HOLSTEINS.

Bull, 3 yrs. old and upwards—1 Samuel Dickie & Sons, Central Onslow, N. S.; 2, Logan Bros., Amherst Point.

Bull, 2 yrs. old—1, Logan Bros.; 2, Harding Bros., Welsford, N. B.; 3, Samuel Dickie & Sons; 4, Lea & Clark, Victoria, P. E. I.

Bull, senior yearling—1, Lea & Clark; 2, Harding Bros.; 3, Logan Bros.

Bull junior yearling—Lea & Clark.

Bull, senior calf—1 and 3, Logan Bros.; 2 and 4, Lea & Clark.

Bull, junior calf—1, Lea & Clark; 2, Logan Bros.

Senior Champion Male—1, Samuel Dickie & Sons.

Senior Reserve Champion Male—Logan Bros.

Junior Champion Male—Lea & Clark.

Junior Reserve Champion Male—Logan Bros.

Grand Champion Male—Lea & Clark.

Grand Reserve Champion Male—Samuel Dickie & Sons.

Cow, 4 yrs. old and upwards—1, Logan Bros.; 2, Lea & Clark; 3, Harding Bros.

Dry Cow, 4 yrs. old—1, Lea & Clark;

3, Logan Bros.; 3, Samuel Dickie.
Cow, 3 yrs. old—1, Logan Bros.; 2, Harding Bros.
Dry Cow, 3 yrs. old—1, Logan Bros.; 2, Lea & Clark.
Canadian Bred Cow, 3 yrs. and upwards—1, Logan Bros.; 2, Lea & Clark; 3, Harding Bros.
Cow, 2 yrs. old—1, Samuel Dickie & Sons; 2, Lea & Clark.
Heifer, 2 yrs. old—1 and 2, Samuel Dickie & Sons.
Heifer, senior yearling—1, Samuel Dickie; 2 and 3, Logan Bros.; 4, Lea & Clark.
Heifer, junior yearling—1, Lea & Clark; 2 and 3, Logan Bros.; 4, Harding Bros.
Heifer senior calf—1, 3 and 4, Logan Bros.; 2, Lea & Clark.
Heifer junior Calf—1, Lea & Clark; and 3, Logan Bros.; 4, Harding Bros.
Senior Champion Female—Logan Bros.
Senior Reserve Champion Female— 1 Logan Bros.
Junior Champion Female—Lea & Clark.
Junior Reserve Champion Female—Samuel Dickie & Sons.
Grand Champion Female—Logan Bros.
Grand Reserve Champion Female - Logan Bros.
Breeders' Aged Herd—1, Logan Bros.; 2, Lea & Clark; 3, Samuel Dickie & Sons.
Breeders' Young Herd—1 and 3, Logan Bros.; 2, Lea & Clark; 4 Harding Bros.
Bull and 3 of his get—1, Samuel Dickie & Sons; 2, Logan Bros.; 3, Harding Bros.
Cow and 2 of her offspring—1, Lea & Clark; 2, Harding Bros.

DAIRY GRADES.

Cow, 4 yrs. and upwards—1 and 2, McIntyre Bros.
Dry Cow, 4 yrs. and upwards—1, Lea & Clark; 2 and 3, McIntyre Bros.
Cow, 3 yrs. old—1 and 2, McIntyre Bros.
Dry Cow 3 yrs. old—1, McIntyre Bros.; 2, Lea & Clark.
Cow, 2 yrs. old—1, McIntyre Bros.
Heifer, 2 yrs. old—1, Lea & Clark; 2, McIntyre Bros.
Heifer senior yearling—1, McIntyre Bros.; 2, Lea & Clark; 3, Samuel Dickie.
Heifer junior yearling—1, McIntyre Bros.; 2, Jas. Barrett & Sons.
Senior Heifer Calf—1, McIntyre Bros.; 2, Wm. Robertson, Amherst; 3, Lea & Clark.
Junior Heifer Calf—1, McIntyre Bros.
Female, any age—1 and 3, McIntyre Bros.; 2, Lea & Clark.

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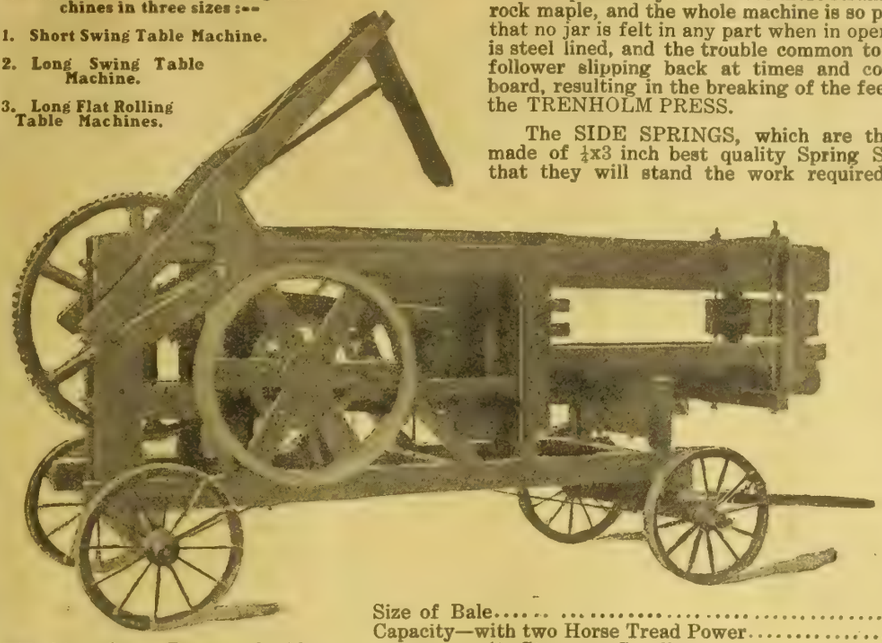
We manufacture Wood Cutting Machines in three sizes :—

1. **Short Swing Table Machine.**
2. **Long Swing Table Machine.**
3. **Long Flat Rolling Table Machines.**



The parts subjected to the most strain are built of seasoned rock maple, and the whole machine is so powerfully constructed that no jar is felt in any part when in operation. The bale box is steel lined, and the trouble common to most presses, of the follower slipping back at times and coming under the feed board, resulting in the breaking of the feed arm is unknown in the TRENHOLM PRESS.

The SIDE SPRINGS, which are thoroughly tested, are made of ¼x3 inch best quality Spring Steel. We guarantee that they will stand the work required of them.

The FOLDER is properly located to do perfect work with ease and requires but a very slight spring pressure to operate. Every bale will be uniform in weight and neatly folded.

This machine will do more work with less power than any other on the market. The truth of this assertion has been proven in all parts of Eastern Canada.

Size of Bale	14x18 inches
Capacity—with two Horse Tread Power	1½ tons per hour
" Steam or Gasoline	3 " " "
Weight	400 pounds
Dimensions—Length of Sills	10 feet, 8 inches
Width outside of Sills	4 feet, 1 inch
Dimensions of Pulley	Diameter 42 inches; face 5 inches
Speed	105 to 110 Revolutions per minute

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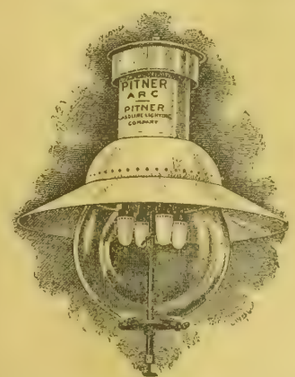

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Herd of 4 Females—1 and 2, McIntyre Bros.; 3, Lea & Clark.

Silver Cup Donated by the Holstein Friesian Association, for best grade cow in a Holstein—McIntyre Bros.

Special Silver Medal donated by the Bank of Commerce, for best New Brunswick herd of 4 dairy cattle over 2 yrs of age—McIntyre Bros.

Sheep.

COTSWOLDS.

Ram, 2 shears and over—1 and 2, H W. Corning, Chegoggin, N. S.

Shearling Ram—1, D. Innis, Tobique River, N. B.; 2, H. W. Corning.

Ram Lamb—1 and 2, H. W. Corning 3, D. Innis.

Ewe, 2 shears and over—1 and 2, H W. Corning; 3, D. Innis.

Shearling Ewe—1 and 2, H. W. Corning; 3, D. Innis.

Ewe Lamb—1 and 2, H. W. Corning; 3, D. Innis.

Aged Pen—1, H. W. Corning; 2, D. Innis.

Pen Lambs—1, H. W. Corning; 2, D. Innis.

OXFORD DOWNS.

Ram, 2 shears and over—1, J. E. Baker & Sons.

Shearling Ram—1, J. E. Baker & & Sons; 2, Chas. Symes.

Ram Lamb—1 and 2, J. E. Baker & Sons; 3, Chas. Symes.

Ewe, 2 shears and over—1 and 2, J. E. Baker & Sons; 3, Chas. Symes.

Shearling Ewe—1 and 2, J. E. Baker & Sons; 3, Chas. Symes.

Ewe Lamb—1 and 2, J. E. Baker & Sons; 3, Chas Symes.

Aged Pen—1 and 2, Jas. E. Baker & Sons 3, Chas Symes.

Pen Lambs—1, Jas. E. Baker & Sons; 2, Chas. Symes.

SHROPSHIRES.

Every prize in this class went to Cephas Nunn, Winslow Road, P. E. I., without competition.

SOUTHDOWNS.

Ram, 2 shears and over—1, Cephas Nunn; 2, J. E. Baker & Sons.

Shearling Ram—1, Cephas Nunn; 2, J E. Baker & Sons.

Ram Lamb—1, Cephas Nunn; 2, J. E. Baker & Sons.

Ewe, 2 shears and over—1 and 3, Cephas Nunn; 2, J. E. Baker & Sons.

Shearling Ewe—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Ewe Lamb—1, Cephas Nunn, 2 and 3, J. E. Baker & Sons.

Aged Pen—1, Cephas Nunn; 2, J. E. Baker & Sons.

Pen Lambs—1, Cephas Nunn; 2, J. E. Baker & Sons.

HAMPSHIRES.

Ram, 2 shears and over—1, Cephas Nunn; 2, Oliver Nunn, Winslow Road.

Ram Lamb—1, Cephas Nunn.

Ewe, 2 shears and over—1 and 2, Cephas Nunn; 3, Oliver Nunn.

Shearling Ewe—1 and 3, Cephas Nunn, 2, Oliver Nunn.

Ewe Lambs—1 and 2, Cephas Nunn; 3, Oliver Nunn.

Aged Pen—1, Cephas Nunn; 2, Oliver Nunn.

Pen Lambs—1, Cephas Nunn.

CHEVIOTS.

Ram, 2 shears and over—1, Chas Symes; 2 and 3, J. E. McAuley, Lower Millstream.

Shearling Ram—1 and 2, Chas. Symes; 3, Geo. Symes, Minudie.

Ewe, 2 shears and over—1 and 2, Chas. Symes; 3, Geo. Symes.

Shearling Ewe—1 and 2, Chas. Symes; 3, Geo. Symes.

Ewe Lambs—1 and 2, Chas. Symes; 3, Geo. Symes.

Aged Pen—1, Chas Symes; 2, George Symes.

Pen Lambs—1, Chas. Symes; 2, Geo. Symes.

DORSETS.

Ram, 2 shears and over—1, Emerson F. Savant, Overton, N. S.

Shearling Ram—1, Cephas Nunn.

Ram Lamb—1, Cephas Nunn; 2, E. F. Savant.

Ewe, 2 shears and over—1 and 3, E. F. Savant; 2, Cephas Nunn.

Shearling Ewe—1 and 2, E. F. Savant; 3, Cephas Nunn.

Ewe Lambs—1, 2 and 3, E. F. Savant.

Aged Pen—1, E. F. Savant; 2, Cephas Nunn.

Pen Lambs—1, E. F. Savant; 2, Cephas Nunn.

FAT SHEEP.

Ewe, over 1 year—1 and 2, J. E. Baker & Sons.

Ewe Lamb—1, Cephas Nunn; 2, J. E. Baker & Sons.

Wether, over 1 year—1, J. E. Baker & Sons.

Wether Lamb—1, J. E. Baker & Sons; 2, Howard Corning.

Swine.

POLAND CHINAS.

Boar, over 2 yrs.—1, Chas Symes.

Boar, 1 yr. and under 2 yrs.—1, Chas. Symes.

Boar, under 6 mos.—1, Chas Symes; 2, Geo. Symes.

Sow, over 2 yrs.—1, Chas. Symes.

Sow, under 1 yr.—1, Chas Symes.

Sow, under 6 mos.—1, Geo. Symes; 2, Chas. Symes.

Herd—1, Chas. Symes.

DUROC JERSEY.

Boar, over 1 yr. and under 2 yrs.—J. E. Baker & Sons.

Sow, over 2 yrs.—1, J. E. Baker & Sons; 2, Chas. Symes.

Sow, under 1 yr.—1, J. E. Baker & Sons.

Sow, under 6 mos.—1. J. E. Baker & Sons.

Sow, and litter—1, J. E. Baker & Sons.

Herd—J. E. Baker & Sons.

Poultry.

Note—c. cock; h. hen; r. cockerel; p. pullet.

Light Brahmas, Harold Hannah, Millidgeville, N. B., 1 c; H. A. Lordly, Riverside, N. B., 2 c; Hartland Poultry Yards, Hartland, N. B., 3 c, 1 and 2 h; 2 r; 4 p; Arch T. Seaton, St. John, 1 and 3 r; 1 and 2 p; E. C. Campbell, Calis, Me., 3 h.

Dark Brahmas—J. H. Warrington, Cornwall, Ont., 1 c, 4 p; Hillside Poultry Yards, St. John, 2 c, 1 p; Hartland Poultry Yards, 3 c, 3 h, 3 r, 2 p; J. E. Warren, St. John, 1 and 2 h, 1 and 2 r.

Buff Cochin—Hartland Poultry Yards 1 c, 1 and 3 h, 1 and 2 r, 1 and 2 p; Harold Hannah, 2 c; W. H. Jackson, St John, 3 c.

Partridge Cochin—Robt. J. Melvin, Yarmouth, N. S., 1 c, 1 r, 1 p; Geo W. Foster, Upper Maugerville, 2 c, 1 h;

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The cleanest skimmer under all conditions—because it has greater skimming surface and because of the uniform distribution of the milk by the improved split wing.

Easy to Fill
Because of the low supply can.

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Because milk is speeded up at centre of bowl, because of the easy-running ball bearings and because of the smooth running gears.

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Because everything is easy to get at.

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Spins like a top at its own centre of gravity.

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Stops the bowl quickly.

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Hartland Poultry Yards, 2 and 3 h, 2 r, 1 p.

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White Cochins—W. E. Sterling, Crouchville, N. B., 1 c; Hartland Poultry Yards, 2 c, 1 h.

Black Langshans—J. H. Warrington, 1 c, 1 r, 2 p; Hartland Poultry Yards, 2 c, 1 and 2 h, 2 and 3 r, 1 and 3 p; C. Killam, 3 c, 3 h.

White Langshans—Hartland Poultry Yards, 1, 2 and 3 c, 2 h, 1 and 2 r, 1 and 3 p; Thos. Parkhurst, Hartland, N. B., 1 h, 2 p; E. C. Campbell, 3 h, 3 r.

Barred Plymouth Rocks—Glenview Poultry Yards, Sussex, N. B., 1 and2 c, 1 and 3 h, 4 r, 1 and 3 p; Seth Jones, Sussex, N. B., 3 and 4 c, 2 h, 1 and 3 r, 2 and 4 p; E. C. Campbell, 4 h; L. H. D. Foster, 2 r.

White Plymouth Rocks—Seth Jones, 1 c, 2 h, 2and 3 r, 2 and 3 p; Frank E. Josselyn, Crouchville, 2 c; A. E. S. Hatfield, St. Martins, 3 c, 1 r, 1 p; Bertram Bavis, Cross Creek, N. B.; 1, and 3 h.

Silver Laced Wyandottes—H. C. Lemmon, St. John, 1 c, 1 h, 1 and 2 r, 1 p; John D. Fraser, Pictou, N. S., 2 c, 3 h, 3 r, 2 and 3 p; Hartland Poultry Yards, 3 c; Robt. J. Melvin, 2 h.

Golden Laced Wyandottes—H. C. Lemmon, 1 c, 2 h, 1 r, 1 and 2 p; Hartland Poultry Yards, 2 c, 3 r; Geo. H. Seaman, Moncton, 3 c, 3 h, 2 r, 3 p.

Buff Plymouth Rocks—L. H. D. Foster, Marshfield, P. E. I., 1 c, 2 h, 2 r, 1 p; A. E. S. Hatfield, 2 c, 1 h, 3 r, 3 p; Robt. J. Melvin, 3 c; Hartland Poultry Yards, 3 h, 1 r, 2 p.

White Wyandottes—Seth Jones, 1 c, 1 and 3 h, 1 r, 1 p; Glenview Poultry Yards, 2 and 3 c, 3 r; F. N. Sterritt, Marysville, N. B., 2 h; J. Chas. Appel, St. John, 2 r; R. J. Melvin, 3 p; A. H. Hannington, St. John, 4 r

Black Leghorns—Thos. Parkhurst, 1 c, 2 h, 3 p; Hartland Poultry Yards, 2 c, 3 h, 2 and 3 r, 2 p; J. H. Warrington, 3 c, 1 h; Geo. B. Lemmon, 1 c, 1 p.

Buff Leghorns—Hartland Poultry Yards, 1 c, 1 and 2 h, 1 r, 1 p; Thos. Parkhurst, 2 c; John Blanchard, 3 h; Geo. B. Lemmon, 2 p.

R. C. Black Minorcas—John D. Fraser, 1 c, 1 h, 1 r, 1 p; Hartland Poultry Yards, 2 c, 2 h.

S. C. Black Minorcas—R. B. Stewart, Yards, 2 c, 1 h, 2 r 1 p, Geo. B. Lemmon, 3 c, Yards, 2 c, 1 h; Geo. B. Lemmon, 3 c, 2 h, 3 r; Robt. J. Melvin, 3 h; John Jackson, 1 h. 2 r, 1 p; Hillside Poultry Yards, 2 p.

White Minorcas—Hartland Poultry Yards, 1 and 3 c, 1 and 2 r, 1 p; Thos. Parkhurst, 2 c; J. H. Warrington, 1 and 2 h, 3 r, 2 p; J. A. Scott, 3 h.

Spanish—Hartland Poultry Yards, 1 and 2 c, 2 h; J. H. Warrington, 3 c, 1 and 3 h, 1 r, 1 and 3 p; A. O. Paoli, 2 and 3 r; 2 p.

Andalusians—H. C. Lemmon, 1c, 1 r 1p; D. J. Douge, St. John, 1 c, 1 and 2 h, 3 r, 2 p; Hartland Poultry Yards, 3 c, 2 r, 3 p.

Silver Unbearded Polands—J. H. Warrington, 1 c, 1 h, 1 r, 1 and 2 p; Hartland Poultry Yards. 2c. 2 h 2 r 3 p

Golden Unbearded Polands—Hartland Poultry Yards, 1 and 3 c, 3 h, 3 r, 2 p; J. H. Warrington, 2 c, 1 h, 1 and 2 r, 1 p; Thos. Parkhurst, 2 h, 3 p.

White Unbearded Polands—J. H. Warrington, 1 c, 1 h.

White Crested Black Polands—J. H. Warrington, 1 c, 1 h, 1 r; Hartland Poultry Yards, 2 c, 2 h, 2 r, 1 p; E. C. Campbell, 3 c, 3 h.

White Bearded Polands—J. H. Warrington, 1 c, 1 and 3 h, 1 r, 1 p; E. C. Campbell, 2 h.

Golden Bearded Polands—J. H. Warrington, 1 and 2 c, 1 h, 1 and 2 r, 1 and 2 p; Hartland Poultry Yards, 3 c, 2 h; E. C. Campbell, 3 h.

Silver Bearded Polands—J. H. Warrington, 1 c, 2 h, 1 r, 1 p; E. C. Campbell, 2 c, 1 and 3 h, 2 r, 2 p; R. J. Melvin, 3 c.

Buff Lace Bearded—J. H. Warrington, 1 c, 1 h, 1 r, 1 p.

Black Red Game—W. H. Jackson, St. John, 1 and 2 c, 1 h; Hartland Poultry Yards, 3 c, 2 h, 1 r; J. H. Warrington, 3 h.

Columbian Wyandottes—W. H. Henry, 1 and 2 h; Hartland Poultry Yards, 1 r.

Partridge Wyandottes—Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p.

Black Javas—J. H. Warrington, 1 c, 2 h, 2 r, 1 p; W. H. Henry, 1 h, 1 r, 2 p; Hillside Poultry Yards, 3 h; Hartland Poultry Yards, 3 p.

S. C. Rhode Island Reds—Thos. S. Kyle, Sussex Corner, 1 and 4 c, 1 r, 2 p; Glenview Poultry Yards, 2 c, 3 h, 4 p; Seth Jones, 3 c, 4 h, 3 r, 1 p; Louise C. Brown, St. John, 2 h; Hartland Poultry Yards, 1 h; Henry Hector, 2 r, 3 p; Nase Bros., St. John, 4 r.

R. C. Rhode Island Reds—Frank E. Josselyn, Crouchville, 1 c, 3 p; Harry L. Holmes, St. John, 2 and 3 c, 2 and 3 h, 1 r, 1 and 2 p; W. H. Henry, 1 h; Nase Bros., 2 r; A. E. S. Hatfield, 3 r.

Dorkings Colored—J. H. Warrington 1 and 2 c, 1 and 2 h, 1 and 2 r, 1 and 2 p; Hartland Poultry Yards, 3 h.

Silver Grey Dorkings—Wm. Robertson, 1 c, 1 h, 1 and 3 r, 2 p; Hartland Poultry Yards, 3c, 3 h, 3 p; J. H. Warrington, 2 c, 2 h, 2 r, 1 p.

White Dorkings—J. H. Warrington, 1 and 2 c, 1 and 2 h, 1 and 2 r, 1 and 2 p. Hartland Poultry Yards, 3 c.

Buff Wyandottes—Glenview Poultry Yards, 1 c, 1, 2 and 3 r, 1 and 2 p; T. T. Dunphy, 2 c, 3 h; Hartland Poultry Yards, 3 c, 2 p; Seth Jones, 1 and 2 h.

Black Wyandottes—Hartland Poultry Yards, 1 c, 1 and 2 h, 1 c, 1 p; Thomas Parkhurst, 3 h.

White S. C. Leghorns—Seth Jones, 1 c, 1 and 2 h, 1 r; Hartland Poultry Yards, 2 c, 3 h, 4 r, 1 p; F. M. Merritt, 3 c; Arthur Hector, 2 and 3 r, 3 p; H. C. Lemmon, 3 p.

Brown R. C. Leghorns— John A. Scott, St. John, 1 and 2 c, 1 and 2 r, 1, 2 and 3 p; Geo. W. Foster, 3 c; Hartland Poultry Yards, 1, 2 and 3 h; 3 r.

Brown S. C. Leghorns—Glenview Poultry Yards, 1 and 2 c, 1 and 2 h, 1 and 3 r, 3 and 4 p; John A. Scott, 3 c; Seth Jones, 3 h; W. H. Henry, Shubenacadie, 3 r; H. E. Warren, 2 p.

Black Hamburgs—Hartland Poultry Yards, 1 c; H. E. Warrington, 2 c, 2 h; John Jackson, St. John, 1 h, 1 r; H. C. Lemmon, 2 h, 2 and 3 r, 2 and 3 p.

Golden Pencilled Hamburgs— J. H Warrington, 1 h, 1 r, 1 p; Hartland Poultry Yds., 2 and 3 h; H. C. Lemmon, 3 r; L. A. Haszard, 3 p.

Silver Pencilled Hamburgs—L. A. Hazard, 1 h; H. C. Lemmon, 1 r, 2 p; John Jackson, 2 and 3 r, 1 and 3 p.

Golden Spangled Hamburgs— J. H. Warrington, 1 c, 1 h; L. A. Hazard, 1 p.

Silver Spangled Hamburgs — F. M. Merritt, 1 c, 2 h; Hartland Poultry Yards, 1 h; L. A. Hazard, 1 p.

Red Caps—Hartland Poultry Yards, 1 c, 1 and 2 h; J. H. Warrington, 2 h.

White R. C. Leghorns—Hartland Poultry Yards, 1 and 2 c, 3 h, 1 and 2 p; H. C. Lemmon, 3 c, 1 h, 1 and 3 r, 3 p; W. H. Jackson, 2 h; Geo. W. Foster, 2 r.

Buff Orpingtons—L. A. Haszard, 1 c, 2 r; Wm. Robertson, 2 c, 3 and 4 h, 1 r, 2 and 3 p; Hartland Poultry Yards, 3 c, 3 h, 3 r, 4 p; C. H. Wisener, Pictou, 4 c, 1 p; Watson Lutz, Moncton, 1 h.

Black Orpingtons—C. H. Wisnes 1 p 2 h, 1 r; Hartland Poultry Yards, 1 h, 2 r; Wm. Robertson, 3 h.

Orpingtons, A. O. V.—A. E. S. Hatfield, 1 c, 3 h, 2 r, 1 p; John A. Scott, 2 h; C. H. Wisener, 2 c, 1 h, 1 r, 2 p.

Houdans—Hartland Poultry Yards, 1 c, 1 h, 2 r, 2 p; J. H. Warrington, 1 r, 1 p; Geo. W. Foster, 3 r, 3 p.

Creve Coeurs—J. H. Warrington, 1 c, 1 and 2 h.

LaFleche—J. H Warrington, 1 c, 1 and 2 h, 1 r, 1 p.

PENS OF POULTRY.

Barred Plymouth Rock Chicks—1, Seth Jones; 2 and 3, Glenview Poultry Yards; 4, Frank E. Josselyn.

Barred Plymouth Rock Fowls—1, Seth Jones; 2 and 3, Glenview Poultry Yards; 4, Hartland Poultry Yards.

White Plymouth Rock Fowls—1, A. E. S. Hatfield; 2, Seth Jones; 3, B. Bavis, 4, Jas. E. Baker & Sons.

White Plymouth Rock Chickens— 1 and 2, B. Bavis.

White Wyandotte Fowls—1, Glenview Poultry Yards; 2 and 3, Hartland Poultry Yards.

White Wyandotte Chickens—1 and 2, Glenview Poultry Yards.

Silver Wyandotte Fowls—1, P. Killam; 2, J. Chas. Appel, St. John.

Silver Wyandotte Chickens—1, H. C. Lemmon; 2 P Killorn.

Golden Wyandotte Fowls—1, H. C. Lemmon; 2, Hartland Poultry Yards.

Golden Wyandotte Chickens—1, Hartland Poultry Yards.

Light Brahma Fowls.—1, Arch T. Seaton, 2, Hartland Poultry Yards.

Light Brahma Chickens. 1, Arch T. Seaton; 2, Hartland Poultry Yards; 3, John A. Scott; 4, Jas. Sterling.

Brown Leghorn Fowls—1, Seth Jones; 2 and 3, Glenview Poultry Yards; 4, Hartland Poultry Yards.

Brown Leghorn Chickens —1, J. E. Warren; 2, Seth Jones; 3, Glenview Poultry Yards.

Pen White Leghorn fowls 1. Seth Jones; 2, Hartland Poultry Yards; 3, F M. Merritt.

Pen White Leghorn chickens—1 Hartland Poultry Yards; 2, Geo. B. Lemmon; 3, F M. Merritt.

Black Minorca Fowls—1 and 2, Hartland Poultry Yards.

Black Minorca chickens—1 H. C. Lemmon; 2, Hartland Poultry yards; 3, Jas. Sterling.

Best Pen Blue Andalusions—1, D. J. Doyle, St. John; 2, Hartland Poultry Yards.

Rhode Island Reds—1, Thos. S. Kyle; 2, Glenview Poultry Yards.

Buff Wyandottes, Glenview Poultry Yards.

White Orpingtons 1 A. E. S. Hatfield.

Buff Orpingtons 1, Hartland Poultry Yards; 2, William Robinson.

Silver Grey Dorkings—1, William Robinson.

Brown Leghorns—John A. Scott.

Rhode Island Red Chicks—1, Louise C. Brown; 2, Glenview Poultry Yards; 3 John A. Scott.

Buff Orpingtons—1, William Robinson.

Houdans—1 Hillside Poultry Yards, 2, Geo. W. Foster; 3, Hartland Poultry Yards.

Silver Grey Dorkings—1, William Robinson.

R. C. White Leghorns—1 H. C. Lemmon.

White Orpingtons—1 A. E. S. Hatfield.

BEST UTILITY PEN FOR FARMERS.

1, B. Bavis—1 White Plymouth Rocks; 2, Wm. Robertson, Buff Orpingtons; 3, W. A. Jack, St. John; White Wyandottes.

Best collection American birds, Seth Jones.

Best collection Asiatic birds, Hartland Poultry Yards.

Best collection Mediterian brirds, Hartland Poultry Yards.

Best collection English birds, Wm. Robertson.

Best collection Bantam Birds W H Jackson.

Best collection Water fowls, Hartland Poultry Yards.

TURKEYS, DUCKS, GEESE.

Bronze Turkey Cock—1, W. F. G. Cosman, St. John; 2, A. E. S. Hatfield; 3, B. Goodspeed, Penniac.

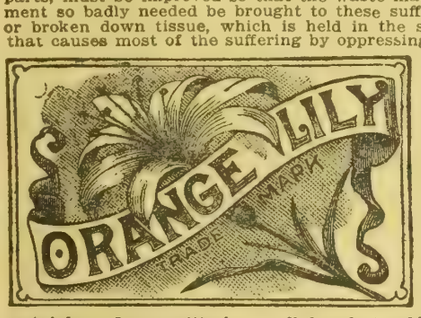
An Object of Pity

That part of our nature which we call the emotional is much more highly developed in women than in men. They are more sensitive, more tender, more sympathetic, more pronounced in their likes and dislikes, more susceptible to the extremes of pleasure and pain; and these refined mental qualities, no less than beauty of form and feature, make up the atmosphere of attractiveness and charm which always surrounds true womanliness.

The continued existence of these winning, engaging womanly characteristics depends to a very large extent on the regularity of the womanly functions and the condition of the womanly organs; and when these functions and organs become disordered or diseased the same mental qualities which are the glory of a well woman become the source of suffering and torture almost indescribable. Her cheery hopefulness is changed to a feeling of despondency, almost of despair, and she is haunted with forebodings of worse evils to come. Instead of being entertaining and companionable, she becomes moody and irritable, being unable to keep her mind from dwelling on her troubles. She becomes morbidly sensitive, imagining that she is being slighted or foresaken by her relatives and friends and she has a most humiliating sense of her miserable condition and of her loss of her womanly attributes. If she is religiously inclined she is very liable to be oppressed with doubts and fears in regard to her spiritual condition, or to think that she is eternally lost. In addition to this, she has also to endure the most distressing aches and pains.

What makes the case still more pitiable, especially with married women, is the fact that few men understand or appreciate the extent of their suffering, or the seriousness of the troubles causing it. Many doctors even speak of these disorders as subjects for ridicule, and the poor sufferer often gets a reputation for being a crank or a scold when she more nearly approaches being a martyr.

As these disorders are due to a disordered condition of the womanly organs, it is evident that to effect a cure these organs must be restored to normal condition; or, in other words, the circulation, which has become congested and stagnant in these parts, must be improved so that the waste matter will be expelled, and the nourishment so badly needed be brought to these suffering organs. It is the waste matter, or broken down tissue, which is held in the stagnant blood vessels in these parts, that causes most of the suffering by oppressing the nerves located in these parts.



The remedy known as ORANGE LILY will positively relieve this congestion and restore normal circulation in the disordered organs. It is an applied or local treatment, and acts wholly on these parts. It is absorbed into the blood vessels in these organs, and as it has powerful antiseptic properties, it immediately acts on the waste matter held there, and causes it to be discharged. As this dead matter is discharged the nerves are relieved, the pains and mental troubles become less, and the nerves and blood vessels become stronger. ORANGE LILY thus proves its merit by actual, visible results. It acts as certainly and as positively on all female troubles as anti-toxin does on diphtheria.

Winnipeg, April 28th, 1909.

Dear Mrs. Currah,—I am very grateful to ORANGE LILY for the change it has made in my life. When I commenced its use eight months ago I felt I would be surely insane before the year was ended. The pain I suffered often made me wish for death, and besides I would have such fits of depression and nervous twitching that I would have to scream. I had doctored with three different doctors for over two years, and had also used both the Pierce and Pinkham medicines, but none of them seemed to reach my case. I felt some improvement after the first month's use of ORANGE LILY and have kept gaining ever since. I do not feel that I am entirely cured yet, but I am so much better than I was that I am sure I will soon be entirely well. I sleep well, and feel cheerful and happy, except that I am occasionally somewhat depressed, but these spells are getting fewer and milder. I have also noticeably improved in appearance. Enclosed find $3 for which please send me two boxes of ORANGE LILY and one of Cerate Massage. I might add that the matter which used to be freely discharged, and which looked like a chicken's gizzard, is becoming very scant, and I imagine that the circulation is pretty well restored. Am I not right in this? Your sincere friend, MRS. L. E. A.

Free to all Sufferers

In order to enable every woman suffering from any form of female disorders to test the merits of ORANGE LILY, I will send to everyone who will send me her address, or the address of any suffering friend enough of the remedy for ten days' treatment, absolutely free. As this is worth 35c. it is only because I know that it must give relief that I make this free trial offer. Further, if any woman wishes expert medical advice, and will write me a full description of her case, I will submit same to the staff of the Coonley Medical Institute, Detroit, Mich., and they will write her direct without expense to her. INCLOSE THREE 2-CENT STAMPS and address MRS. FRANCES E. CURRAH, WINDSOR, ONT. 2

1 Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only one cent a word, you can advertise anything you wish to buy, sell or exchange. The address must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small ad, as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, Sussex, N. B.

WANTED.—Hides, calfskins, sheep and lamb pelts, J. J. McLEAN & SONS, Hopewell, N. S.

GUERNSEYS FOR SALE.—Two yearling Bulls, one six months old Bull and several Bull Calves.—T. D. BLAIKIE, Great Village, N. S.

SALESMEN WANTED for the best automatic compressed-air hand sprayer made; liberal terms; sample machine free to approved agents. —CAVERS BROS., Galt, Ont.

BUYERS OF DRESSED PORK.—We can take delivery from now out, 100 to 300 pounds each. Prompt returns.—JOHN HOPKINS, St. John, N. B.

$2.00 TO $5.00 A DAY SURE.—Pleasant honorable work at your own home, for man or woman. No experience or capital necessary. Our company with ample capital will furnish work and plans absolutely free. EDW. McGARVEY, Manager, Toronto, Ont

FOR SALE.—Two hundred acres of land, part in good cultivation, with or without crops, two acres in fruit trees. Near post office, school, R. road. For further particulars, apply to CHAS. E. NICKERSON, Gardners' Mills, Yar. Co., N.S.

DAIRY AND STOCK FARM FOR SALE.—Three miles from Sussex, 300 acres, 200 acres under cultivation, large intervale, cuts 80 tons hay. Good two-story house heated by furnace, water pumped by windmill, good barn.—HARVEY B. PARLEE, Sussex, N. B.

THREAD POWER FOR SALE.—One second hand two-horse Moody thread power for sale cheap. First set of planks still on the machine. Write POWER care of MARITIME FARMER Sussex, N. B.

PICTURE POST CARDS.—Rich natural colored post cards of Canada from ocean to ocean. No trash. Per dozen cards, 20c. Postage paid. —GEORGE L. WHITE, Durham Bridge, N. B.

BERKSHIRE PIGS FOR SALE.—A choice lot of pure bred Berkshire pigs for sale. Prices reasonable. Correspondence solicited.—ALBERT PAYNE, Kane P. O., Bathurst, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits Flowers, Vegetables, etc. Catalogue free.—MORGAN'S POULTRY SUPPLY HOUSE, London, Ont.

PERSONS having waste space in cellars, outhouses or stables can make $15 to $30 per week growing mushrooms for us during fall and winter months. Now is the best time to plant. For full particulars and illustrated booklet write MONTREAL SUPPLY COMPANY, Montreal.

BERLINER GRAMAPHONE FOR SALE.—First-class order. Company's guarantee not yet run out. This splendid instrument, costing sixty-five dollars, will be shipped, with over twenty dollars' worth of fine records for thirty dollars cash. Write GRAMAPHONE, care of MARITIME FARMER, Sussex, N. B.

Write us for Catalogue of **Feed Cookers and Folding Steel Roof Ladder and Fire Escape.**

We are the largest m'f'g'rs in Canada.

The James Bros. Foundry Co., Perth, Ont.

MAIL CONTRACT.

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 21st October, 1910 for the conveyance of His Majesty's Mails on a proposed contract for four years, three times per week each way, between Hillsdale and Sussex from the first of January next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Hillsdale, Sussex and intermediate offices and at the office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH,
Ottawa, Sept. 2nd, 1910.

Calves Raise Them Without Milk
Booklet Free
A. A Archibald & Co., Truro, N. S.

Bronze Turkey Hen—1, Hartland Poultry Yards; 2, B. Goodspeed; 3, W. F. C. Cochran.

Pekin Drake—1 and 2, J. V. Jackson, Moncton; 3, T. T. Dunphy, Sandy Pt. Road, N. B.

Pekin Duck—1 and 3, J. V. Jackson; 2, T. T. Dunphy.

Aylesbury Drake—1, Hartland Poultry Yards.

Aylesbury Duck—1, Hartland Poultry Yards.

Rouen Drake—1, Hartland Poultry Yards.

Rouen Duck—1, Hartland Poultry Yards: 2, E. C. Campbell.

Mallard Drake, 1, W. J. Jackson, St. John; 2, E. C. Campbell.

Mallard Duck—1, W. J. Jackson; 2, E. C. Campbell.

Black Indian Drake—1, E. C. Campbell.

Black Indian Duck—1, E. C. Campbell.

Colored Muscovey Drake—1, Hartland Poultry Yards.

Colored Muscovey Duck—1, E. C. Campbell.

White Muscovey Drake—1, Hartland Poultry Yards.

White Muscovey Duck—1, Hartland Poultry Yards.

Cayuga Drake—1 and 2, J. H. Warrington.

Cayuga Duck—1, J. H. Warrington.

Indian Runner Drake—1, Harry J. Galey, Milford, N. B.

Indian Runner Duck—1, H. J. Galey.

Tolouse Gray Gander—1, B. Goodspeed.

Embden White Gander—1 and 2, Jas. E. Baker; 3, Hartland Poultry Yards.

Embden White Goose—1 and 3, J. E. Baker; 2, Hartland Poultry Yards.

TURKEYS, DUCKS AND GEESE OF 1910.

Pair Pekin Ducks—1, H. J. Galey.

Pair Aylesbury Ducks—1, Hartland Poultry Yards.

Pair Rouen Ducks—1, E. C. Campbell.

Pair Mallard Ducks—1, E. C. Campbell.

Pair Black Indian Ducks—1 and 2, E. C. Campbell.

Pair Colored Muscoveys—1, E. C. Campbell.

Pair White Muscoveys—1, E. C. Campbell.

Pair Black Ducks—1, E. C. Campbell.

Pair Young Gray Calls—1, E. C. Campbell.

Pair Indian Runners—1, H. J. Galey.

Pair Tolouse Geese—1, B. Goodspeed.

Pair Embden Geese—1 and 2, J. E. Baker; 3, Hartland Poultry Yards.

Pair English Pied Geese—1, T. T. Dunphy.

ORNAMENTAL, ETC.

Pair Guinea Fowl—1, J. H. Warrington; 2 and 4, Hartland Poultry Yards; 3, Glenview Poultry Yards.

Pair Pheasants, Golden—1, H. C. Lemmon.

Pair Black Dutch Rabbits—1, Robert Knowles, St. John.

Pair White Rabbits—1, Thos. Ramsay, St. John.

Pair Maltese Angora Rabbits— 1, Harold Hannah.

Pairs Belgian Hares—1, Evans E. Stanley, St. John; 2, H. Gordon Scott, St. John.

Pigeons were shown by Robt. Evans St. John; H. C. Lemmon, Hartland Poultry Yards and J. V. Jackson.

EGGS.

Most Artistic Arrangement of 12 Dozen new laid Eggs—1 and 2, Hartland Poultry Yards.

Heaviest Dozen White Eggs—1, Hillside Poultry Yards; 2, P. Killorn, St. John.

Heaviest Dozen Brown Eggs—1, Thos. S. Kyle; 2, B. Goodspeed.

Dairy Produce.

BUTTER.

Box for Export—1, J. H. Leclere, Foster, P. Q.; 2, W. A. McKay, Scotsburn, N. S.; 3, J. E. McAuley, Lower Millstream.

Prints, 20 lbs.—1, W. A. McKay; 2, J. H. Leclere; 3, J. E. McAuley, 4, Robert H. Cother, St. John.

Prints, 10 lbs.—1, W. J. King, Smiths Creek; 2, Mrs. Benj. Lester, Apohaqui; 3, B. Goodspeed; 4, Lewis R. Rose, Urbania, N. S.

Crock or Tub, 20 lbs.—1, W. J. King; 2, B. Goodspeed; 3, L. R. Rose; 4, Thos. S. McAuley, Lower Millstream.

Box, Crock or Tub 10 lbs.—1, J. H. Leclere; 2, W. A. McKay.

Best 10 lbs. Butter in 1 lb. Rolls or Prints, made from cream separated by a Magnet Cream Separator—Mrs. E. J. Hoar, Scott's Road, N. B.

CHEESE.

Cheese, 2 Cheddar, Colored—1, Leo Hughes, Kinkora, P. E. I.; 2, William Clark, Emerald, P. E. I.; 3, John A. Murchison, Orwell, P. E. I., 4, S. H. Brown, North Millstream, P. E. I.

Cheese, 2 Cheddar, White—1, Leo Hughes; 2, Adrian McInnis, Red Point, P. E. I.; 3, John A. Murchison.

Cheese, 3 Flats Colored—Leo Hughes; 2, Ed. Larkin, Cardigan Bridge, P. E. I.

Cheese, not less than 10 lbs. home made dairy—1, John S. Cousins, Paris Corner, P. E. I.; 2, B. Goodspeed, 3, E. C. Young, Bridgetown, N. S.

DR. J. WOODBURY'S HORSE LINIMENT

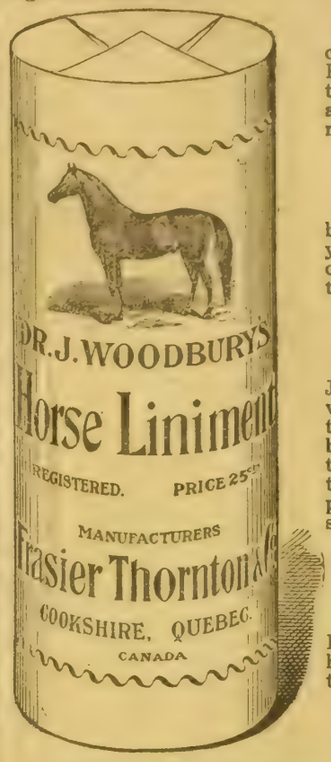
INFALLIBLY THE REMEDY

For the removal of Splints, Bog Spavins, Enlargements of any and every description it has no equal. Given internally, it will promptly relieve and remove any and every character of Cough, Enlargements of the Glands, Affections of the Kidneys. For Distemper, Strangles and Colic it is infallibly the remedy.

All horses that are stabled should have an application of Dr. J. Woodbury's Horse Liniment to the hoofs of the fore feet to prevent their becoming feverish, dry, brittle, hard, contracted or otherwise injured.

Insist on having Dr. J. Woodbury's Horse Liniment. We warrant it to effect that for which it is recommended when used according to directions.

Its beneficial effects are so prompt and decided that it has excited the admiration of the leading horsemen of the Dominion and secured their highest confidence.



Bear River, N. S.

Dear Sirs:—We do not hesitate in recommending your Dr. J. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumberman should be without it. Yours truly,

CLARKE BROS.

Hubbard's Cove, N. S.

Dear Sirs:—I have used Dr. J. Woodbury's Horse Liniment in my stable for years and consider it the best liniment on the market for both internal and external use. Yours truly,

C. C. McLEAN.

Truro, N. S.

This is to certify that I have used Dr. J. Woodbury's Horse Liniment with the very best results for colds, coughs, distemper and all lung diseases. It is the best thing to give horses in the spring to keep them in condition. It purifies the blood, cleanses the lungs from impurities, which may exist, and gives the system healthy action.

NEWTON LEE,
Owner "All Right," 5817.

Elmsdale, N. S.

Dear Sirs:—Kindly send me 6 dozen Dr. J. Woodbury's Horse Liniment. I have not a bottle in the store and it is the only kind my customers will take.

Yours truly,
ELMSDALE MERCANTILE CO.,
Elmsdale, N. S.

Dear Sirs:—I cured my horse with Dr. J. Woodbury's Liniment. It was a bad case of distemper. I always recommend this liniment to my friends as the best for all diseases of the horse.

Yours truly, H. R. WHITEHEAD.

Dear Sirs:—One of my horses had a bad cough, and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months' standing. In my large experience with horses, I consider this liniment to be the best made for all diseases in the horse, and I recommend it to my friends. E. J. ANDERSON, Truro, N.S.

Manufacturers:

Fraiser Thornton & Co., Cookshire, Que., Can.

Butter Making Competition.

Open to Creamery employes—1, Thos S. McAuley; 2, Robert H. Colther.

Open to private butter makers—1, Mrs. Benj. Lester, Apohaqui; 2, B. Goodspeed Penniac, N. B.; 3, Lewis R. Rose, Urbania, N. S.

Fruit.

Fruits grown in Albert County—1, W. A. Colpitts, Mapleton.

Fruits grown in Kings County—1, A. R. Gorham, Gray's Mills.

Fruits grown in Queens County—1, S. L. Peters.

Fruits grown in Sunbury County—1, R. D. Hubbard, Burton; 2, I. W. Stevenson, Upper Sheffield.

Fruit grown in Victoria County—1, F. C. Henderson, Andover.

Best County Collection in above—1, S. L. Peters.

Best Collection from Nova Scotia—1, B. F. Chesley, Clarence, N. S.; 2, G. N. Banks, Morristowm, N. S.

Best Collection Fruits shown in Natural Condition—1, S. L. Peters; 2, G. N. Banks; 3, H. D. Johnson, Wolfville.

Best collection Small Fruits shown in glass—1, S. L. Peters; 2, A. R. Gorham.

Best Collection Fruits by New Brunswick Growers.—Bank of Commerce Special—1, S. L. Peters.

Apaiery.

HONEY AND BEE SUPPLIES.

Best Display Extracted Granulated Honey in Glass—1, Wilfred Todd, Milltown, N. B. ...

Best Display Liquid Honey in Glass—1, Wilfred Todd.

Comb Honey in Sections—1, Wilfred Todd; 2, Julia A. Corbett, Amherst Point.

Buckwheat Honey in Glass—1, W. Todd.

Clover Honey in Glass—1, W. Todd.

Largest and best varieties of uses to which honey can be put—1, W. Todd.

Best Wax—1, B. Goodspeed; 2, W. Todd.

Best Foundation for Brood Chambers—1, W. Todd.

Best Foundation for Sections—1, W. Todd.

Newest and most practical new invention in Apiculture—W. Todd.

Special Notice!

Have sold out my stock of Poultry Supplies to the Maritime Poultry Supply Co., Moncton, N. B., who carry a full line of feeds and supplies of all kinds and will send catalogue to any address on receipt of post card.

Geo. H. Seaman, - Moncton, N. B.

The
MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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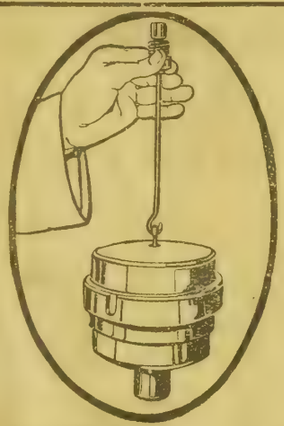
Published twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada

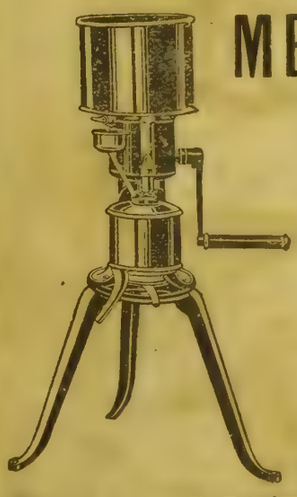
Vol. 15. SUSSEX, N. B., SEPTEMBER 20, 1910 No. 24

We Make No Claims For The MELOTTE CREAM SEPARATOR That Actual Experience Has Not Borne Out.

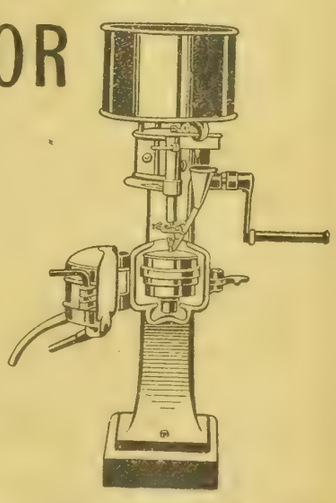
SO when we say that the Melotte Cream Separator actually does skim closer, run easier, stand hard usage better than any other Separator, and make five cows equal to six the old way, we are not making mere advertising statements—we are giving you the actual facts proven on thousands of Canadian farms.



THE Melotte Separating bowl, the only suspended bowl, is larger than others, and is absolutely self balancing, having no inside lumps of balancing solder. It is practically frictionless on this account. Now, friction saved means labor saved, and wear on parts saved. **That,** in a nutshell, is the secret of the durability of the Melotte Cream Separator.



MELOTTE CREAM SEPARATOR



Nearly Fifty Thousand have been sold and are in use in the last ten years.

MR. FARMER—The Melotte Cream Separator will earn big money for you. We want you to try the Melotte Cream Separator, on your own farm, at your leisure, by yourself. The "experts" and agents can all run Separators, of course, but what we want you to do is to try the Melotte for yourself. See how simple it is to understand—see how little labor it needs—see how well it does its work—see for yourself, in a glance, the marvellous efficiency of the self balancing separating bowl—the bowl that makes the "Melotte" famous.

Just write us and we'll make you an offer—the best offer you ever had.

R. A. LISTER & CO., LIMITED, 82 Water Street, St. John, N. B.

62 Stewart Street, Toronto, Canada.

Agricultural College, Truro, Nova Scotia.

Next Session of Full Course Begins NOVEMBER 1st, 1910.

Next Short Course for Farmers and Farmers' Sons Begins JANUARY 3rd, 1911.

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies Begins JANUARY 4th, 1911.

Three hundred and fifty [350] students enrolled in the various classes during the past session. A large increase is expected next session.

Tuition FREE to all students from the Maritime Provinces.

A farmer's son attending the College, can take a full course in the various branches of Agr[illegible]ture Horticulture, D[illegible]y, P[illegible]y Raising, Veterinary Science, etc., and at the same time, in English, [illegible] l Economy, the various Sciences and other lines regularly studied i[illegible]

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a scho education and now wish to improve their knowledge in all lines.

Students completing the two year course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges.

For full particulars apply to,--

M. CUMMING, B. A., B. S. A., - Principal Agricultural College, - Truro, N. S.

The Last Call for Entries

FOR THE

Provincial Exhibition,

HALIFAX

1910—Sept. 28 to Oct 6—1910

$20,000==In Premiums==$20,000

$6,200==6 DAYS HORSE RACING==$6,200

Entries Close in all Classes SEPTEMBER 10th.

M. McF. HALL, = = Manager and Secretary, Halifax, N. S.

EVERY HOME A COLLEGE.

The young man or woman with a grip on some professional subject has a much better start in life than one **unprepared** for any particular line of work. A profession should be chosen **according to one's inclination and ability.** Many have plenty of ability **without knowing it,** and they can only find out by making the experiment. If you wish to step up into a position that pays a **good salary,** and commands respect and social standing, educate yourself to take a responsible situation in the business world. **All your studying can be done at home in your leisure time. Good positions paying $20 to $50 per week** can only be filled by those **who take a course of instruction that prepares and fits them for special work.**

The accompanying coupon gives a list of the courses we teach. Underline your choice—fill in your name and address—cut out the coupon, and mail to us for particulars.

The
Shaw Correspondence School
Yonge and Gerrard Sts., Toronto, Canada

Please send me particulars and literature concerning the course I have underlined.

Chartered Accountancy	Art
Higher Accounting	Illustrating
Commercial Specialist	Designing
Bookkeeping	Art Specialist
Shorthand	Teachers' Art
Typewriting	Story Writing
Matriculation	Journalism
Commercial Law	Show Card Writing
Penmanship	Photography
English	Ad-Writing

Name _____

Address _____

F.

KEEP MILK SWEET!

It is important to thoroughly cleanse pans, separators and other utensils with hot water. The microbe that sours milk is inaffected by hot water.

ASEPTO SOAP POWDER

in the water will thoroughly destroy germs We guarantee it to be antiseptic, and it is as cheap as soap.

Sold in 5c Packages by ALL DEALERS

ASEPTO SOAP POWDER SWEETENS THE HOME.

Asepto Manufacturing Co.

St. John, - - N. B.

Farmers of Quality

Stationary and Mounted, in 1 1-2 to 30 Horse Power.

Want Quality!

Readers of THE MARITIME FARMER are of the quality stamp; we realize their discerning ability to pick an article of machinery that is correct in every mechanical detail. That is the reason why such care is taken to see that the **Ideal Gas and Gasoline Engines** are what we claim for them.

Every part of the "**Ideal**" is interchangeable—a mighty strong feature. The cylinder, instead of being cast with the base, is cast separate and bolts on the base. The valves, instead of sealing directly on the cylinder head are enclosed in a valve cage, and the valve cage is inserted in the cylinder head, so that when the valves become worn, the valve cage and valve can be taken out and ground without removing the cylinder head.

The idea of casting the cylinder separate from the base is a good one, for when the walls of the cylinder become worn, you don't have to buy a complete new engine, you only require a new cylinder that can be bolted on the base. Another good feature is an extremely long piston with double rings instead of using three rings. We use three sets of two rings each on the Ideal.

Another thing, there is a speed regulator on this engine which enables you to run the engine at any speed, and, of course, when you reduce the speed of the engine, you also reduce the fuel consumption. For instance, if a man had a 6 H. P. engine and wanted to run a cream separator with it, he could reduce the speed and thereby cut down his fuel consumption to suit the work.

All these are points to consider when looking for a gasoline engine of quality—one that stands without a peer.

"**Ideal**" **Gas and Gasoline Engines** are built on honor and built to give their operators satisfaction, and they do it. We do not build a cheap or low grade engine, but do cater to that class of buyers who wish a first class article at a reasonable price.

Agents Wanted in Unrepresented Districts.

Write for information

GOOLD, SHAPLEY & MUIR CO., Ltd., - Brantford, Ont.

Maritime Address--29 Dock St., ST. JOHN.

J. A. Pugsley & Co., St. John, N. B., Agents.

Health Versus Money.

Attention is called to this advertisement so that you may know where the famous Oxygenator may be secured.

The marvellous machines (which by the way are creating a furore from the Atlantic to the Pacific) can be purchased or rented by applying to **Suite 20, Robinson Building, St. John.**

The Oxygenator is a machine that proves, by its successful record of the past 14 years, that by the use of Oxygen, and only Oxygen (transmitted through the pores to the blood) that it can and does cure disease.

No Drugs, Massage or Electricity used.

The machines last for life and may be used by each member of the family.

Hundreds in use now in the Maritime Provinces. A post card will bring you full information.

Telephone Main 2367. Lady attendants.

The Maritime Oxygenator Co.,

C. Fraser McTavish, General Manager.

P. S.—Exceptional opportunities offered to capable men and women to represent us in unoccupied territory.

P. S. S.—**ST. JOHN** is the head office for New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland.

Advertise in the Maritime Farmer.

Purchasing Perfection

That's what you do when you lock out loss and distress from the Dairy by putting in

The DE LAVAL Cream Separator

CATALOGUE FREE.
AGENTS EVERYWHERE.

You Get The Money's Worth.

THE DE LAVAL SEPARATOR CO.,
173-177 WILLIAM STREET, MONTREAL.

VANCOUVER **WINNIPEG**

Extraordinary Opportunity ! To Buy a High Grade Gasoline Engine Cheap.

400 Standard Fairbanks-Morse Gasoline Engines.

To be sold at Wholesale Prices. Act quickly as the offer only holds good while they last.

THE REASON.

During the year 1909 over four hundred country Grain Elevators were erected in the North-West and in practically all of these houses were placed

Fairbanks-Morse Gasoline Engines.

We have manufactured and have ready for delivery in anticipation of this year's requirements.

100 5-Horse Power Engines. 150 8-Horse Power Engines.
100 10 " " " 50 12 " " "

Owing to unfavorable conditions there will be little elevator building and rather than carry them over another year we will sell them at great reduction as long as they last, as we haven't the room to carry them

Fairbanks-Morse Gasoline Engines are in use the world over. EIGHTY THOUSAND ENGINES having been sold to date. The Engines are the result of years of experience on all problems connected with Gas Engine Practice No Company in the world has spent as much money as Fairbanks-Morse & Co. on experimental and development work in connection with every type of Gas Engine.

The many thousands in use to-day stand as a guarantee of the absolute correctness of the principles involved, the high class of workmanship, careful selection of materials and the reliable and efficient service rendered by the finished machine

A record like this is based solely upon recognized merit.

YOUR OPPORTUNITY.

M. F. September 6, 1910.

The Canadian Fairbanks Co., Limited.

Send me prices and complete information regarding your Special Offer on 400 Fairbanks-Morse Engines.

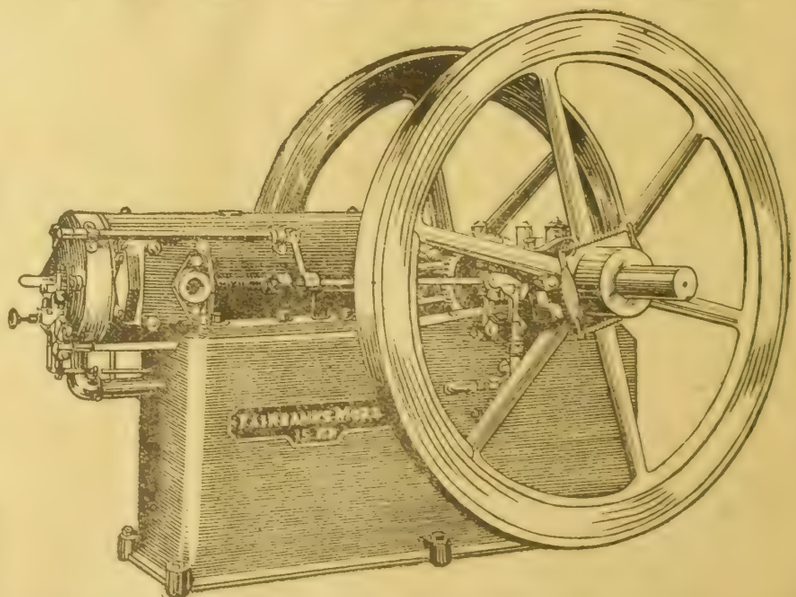
Name .....

Address .....

State Size Required.

Mail this coupon to our nearest branch office.

THE ENGINE.



Fairbanks-Morse Standard Horizontal Gasoline Engine, complete with Fuel Tank and Cooling Tank. Size 5, 8, 10 and 12 Horse Power. These engines are not mounted on skids, or fitted with evaporator cooling tanks, but are just as we made them up for the Grain Elevator Trade in the West.

The Canadian Fairbanks Co., Limited,
Fairbanks Scales—Fairbanks-Morse Gasoline Engines—Safes and Vaults.—MONTREAL.
BRANCHES—Toronto, St. John, N. B., Winnipeg, Saskatoon, Calgary, Vancouver.

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